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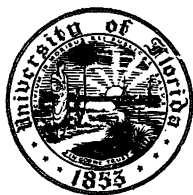
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THE ALPINE JOURNAL

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AND

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BY MEMBERS OF THE ALPINE CLUB

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THE ALPINE JOURNAL.

MAY 1923.

(No. 226.)

VALEDICTORY ADDRESS.

By J. NORMAN COLLIE, PRESIDENT OF THE ALPINE CLUB.

[Read before the Alpine Club, December 11, 1922.]

IT is now three years since I was honoured by being made President of the Alpine Club, and the time has come for me to address you on the subject of the chief events that have happened during my term of office, and to review what progress has been made in the mountaineering world.

Three years ago we were recovering from the aftermath of the war, and looking forward to the restoration of our playground in the Alps to what it was before 1914. It is true that the hills are still the same—they do not change—neither does the keenness of the members of the Alpine Club for visiting the great mountains of the world become less. But in human affairs, where 'the thousand natural shocks that flesh is heir to' rule, the old days unfortunately cannot come back. We are years older than we were before the war; the old order has been rudely broken; but in spite of those evil days we can show that we are still capable of outbursts of great mountaineering energy.

The Alpine Club is always young, but, alas! it is true also that individually we grow old. We are 'players who strut and fret our hour upon the stage and then are heard no more.' Every year exacts its toll, and every year some of those worthy men, the begetters of mountaineering, pass away. Nevertheless the traditions are piously handed down from generation to generation.

During the last three years the Club has lost heavily amongst its older members; some of them there are who joined the Club almost at its start—three of these have been on the Club lists for over sixty years. These three, Thomas Blanford, J. C. Hawkshaw, and the Rev. J. K. Stone ('Father Fidelis'),

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were all elected in 1860. Thomas Blanford took an honourable place with the conquerors of the Alps, especially in the Tarentaise during the years 1863-4-5. J. C. Hawkshaw did much climbing in his youth and was a good athlete. At one time he was President of the Institute of Civil Engineers. Father Fidelis was a great wanderer amongst the mountains, especially in the Cordilleras and the Andes. In his early days he was a friend of Sir Leslie Stephen.

Besides these fathers of the Alpine Club six others have died that for fifty years or more were members of the Club: C. Comyns-Tucker, F. A. Wallroth (Vice-President in 1890, and Secretary 1875-7), W. M. Pendlebury, who in 1872 made the first ascent of Monte Rosa from Macugnaga, H. S. Williams, Colonel E. Clayton, and F. H. Cheetham.

Our heaviest loss, however, has been by the death of two of our former Presidents, Hermann Woolley and Lord Bryce. Each in his way represented great things. There are indeed few mountaineers who could rank with Woolley. His knowledge of ice and snow was wonderful; he was a good rock climber and of marvellous endurance, and if necessary could go sure-footed at any pace on a difficult climb. He also possessed the rare faculty of recognising the best route up or down an unclimbed mountain. Woolley was a typical all-round mountaineer, either with guides or without them; of his good temper, modesty, and charming character, those who climbed with him know well how few there are that come up to his standard.

Lord Bryce was great in other ways. His knowledge of the mountains was world-wide, and he never missed a chance of visiting new ones even during the last years of his life. Although we cannot claim him as a great mountaineer, yet we are proud to have had as our President one who forged the link between two great nations, and one whose political influence was acknowledged all the world over, also one who as a man was learned, wise, and tolerant.

In E. A. Broome we have lost one of our most active and devoted members. During thirty years he carried through a series of expeditions that has rarely been equalled. A man full of energy and spirit, and a great climber, by his death the Club has been deprived of one of its best members.

Another energetic mountaineer who has left behind him a worthy record is Dr. Kellas. His achievements in the Himalaya are remarkable, not only for the number of first ascents up to over 23,000 ft., but also for the rapidity with

which he ranged through the mountain lands he visited. His itineraries remind one of those of the early climbers in the Alps.

The Alpine Club attracts men of every profession, and we find amongst those who have passed away during the last three years Sir George Savage, a great physician; Edward Hopkinson, a great engineer; W. A. Baillie-Grohman, an enthusiastic sportsman; E. T. Compton, a distinguished alpine artist; F. W. Bourdillon, a graceful poet and acknowledged authority on the old French romances; also Reginald Farrer, an ardent botanist.

The only death amongst our Honorary Members is that of H.S.H. the Prince of Monaco.

Several other well-known members of the Club that have died are: Sir George Prothero, Vice-President in 1907; Alfred Topham; J. T. Wills, son of Sir Alfred Wills; and F. Whelan.

Several of the old alpine guides have left us: Michel Payot, a great name in the memory of veteran English climbers—he, with Mr. J. Eccles, over forty years ago, climbed Mont Blanc from the Brouillard Glacier by the great couloir and the Peuteret ridge; Augustin Gentinetta; Antoine Maquignaz, who accompanied the Duke of the Abruzzi to Mount St. Elias in Alaska, and Sir Martin Conway to the Andes. Also old Peter Baumann, the last of that very distinguished group of early Grindelwald guides and pioneers of the Alps. He climbed in his youth with Moore, Tyndall, and Leslie Stephen, and, like so many of the older guides, delighted in snow and ice work, and was an ideal teacher of mountain craft.

And last of all must be mentioned Dr. Alexander Seiler, the friend of every English mountaineer. His death is a great loss, and Zermatt will never be the same again.

During the last three years several distinguished foreign mountaineers have become Honorary Members of the Club: M. le Baron F. Gabet, President of the C.A.F., and M. Henri Mettrier; also Sig. Cav. G. Bobba and Sig. Cav. Guido Rey.

The activities of the various members of the Club are as strenuous as ever amongst the Alps, in spite of the fact that during the last two years several of our most energetic younger climbers were with the expedition to Mount Everest.

Certainly one of the most interesting climbs, although it is not a new one, was made last year by Messrs. Courtauld, Finch, and Oliver, with the guides Adolf Aufdenblatten and his brother, from the Brouillard Glacier and the Eccles Col to the Peuteret Arête and Mont Blanc de Courmayeur. This climb is quite one of the finest in the Alps. It is therefore the

more remarkable that from 1876, when Mr. Eccles with Michel and Alphonse Payot first climbed it, till 1921 the ascent was never repeated.

Another arduous climb must be put to the credit of that enthusiastic mountaineer, O. K. Williamson, namely, the traverse of the Täschhorn over the S.E. and N. arêtes, with a descent by the Domjoch.

R. W. Lloyd has made the first ascent of two cols, the Zinal face of the Oberschallijoch and the N. face of the Col de Bionnassay; also a traverse of the Dent Blanche.

One of our foreign members, Monsieur Marcel Kurz, has succeeded in ascending, for the first time in winter, the last two peaks in the Pennine Range over 4000 m., the Ober Gabelhorn and the Täschhorn.

Several other first ascents are worth mentioning that, however, were not made by members of the Alpine Club. The ascent of that famous ridge, the E. or Mittellegi Ridge of the Eiger, has at last been accomplished. As far back as 1874 it was first attempted by the Messrs. Hartley, and from time to time many other mountaineers tried it without success. In September 1921 Mr. Yuko Maki, of the Japanese Alpine Club, together with F. Amatter and two other Grindelwald guides, conquered it. The difficulty of climbing up the great final pitch can be imagined, for it took them seven hours.

That eminent climber Sig. G. F. Gugliermina has ascended the Mont Dolent by the S.W. face, and the W.N.W. arête of Mt. Collon has been climbed by M. Schwartz.

In the United States Mr. Le Roy Jeffers has made the first ascent of Mt. Moran, the finest peak in the Teton Range; and in Canada Mr. V. A. Fynn has made a fine new ice and snow route up the N.E. face of Mt. Victoria.

Not only have several members of the Club been busy with Mt. Everest, but also there have been two other expeditions to the Himalaya. Dr. Kellas, in 1920, visited Kamet in Garhwal, and studied the effect of oxygen at high altitudes. He reached a height of 23,600 ft. During the ensuing winter he ascended a peak 18,000 ft. high, N. of the Kang La, from which he obtained the first photographs ever taken of the high mountains to the N. of Mt. Everest, which were visited a year later by the Mt. Everest expedition. Early in the spring of 1921 he was back again at the Kang La, whence he climbed a peak of 19,000 ft. He next made the first ascent of Narsing, 20,000 ft., and finally worked out a new route through the icefall on Kabru to a height of 21,000 ft. This icefall took

C. W. Rubenson five days of hard work to cut through on his ascent of Kabru.

Another expedition to the Himalaya in 1920 was that of Mr. H. Raeburn. He and Mr. C. G. Crawford attacked the southerly walls of Kangchenjunga from the Yalung Glacier; the highest point reached was 21,000 ft. On their way back they crossed a new pass, the Rathong La.

Mention must also be made of the Oxford University expedition to Spitsbergen, where a new glacier system was discovered.

We now come to obviously the most important mountaineering adventure, the one sent by the Royal Geographical Society and the Alpine Club to Mt. Everest in 1921 and 1922. Never has there been any mountaineering expedition of such interest or importance. For not only was it to an unknown land of mighty peaks, but the peaks themselves were the highest in the world. Moreover, geographically the results were of equal value with the mountaineering ones: thousands of square miles of a totally new country never before visited by a European were mapped. The flora and fauna have yielded specimens new to science, and the geological strata that build up that stupendous rampart separating Eastern Nepal from Tibet have been studied for the first time.

The premier expedition in 1921 was naturally one of reconnaissance, and under the able guidance of Colonel Howard-Bury accomplished even more than was expected of it, especially from the point of view of exploration.

Messrs. G. L. Mallory and G. H. Bullock, after an exhaustive search round Mt. Everest on the W. and the N. and the S.E. sides, at last discovered a vulnerable spot from which the summit might be reached without any excessive amount of difficult ice, snow, and rock work, and the second expedition during last summer has shown that they were justified in their discovery.

They also climbed a peak, Ri-ring, 22,520 ft., on the W. of the main Rongbuk glacier, and another about the same height at the head of the Kharta Valley. Finally they ascended the Chang La, 28,000 ft. from which the obvious route up Mt. Everest starts.

The photographs brought back in 1921, chiefly those of Colonel Howard-Bury, were a fit tribute to the great peaks visited. Many of these huge peaks, such as Makalu, Gaurisankar, and Pumori, are worthy of belonging to the greatest mountain range in the world, but it is unfortunate that Mt.

Everest, the highest of them all, should be built up, at least on its northern face, in a somewhat commonplace manner. Those other great monarchs, K₂, Kangchenjunga, Makalu, and Nanga Parbat, are infinitely finer. The ice world on the N. side of Mt. Everest also is tame compared with those two marvellous glaciers and their tributaries, the Baltoro and the Siachen glaciers. It is true that we do not know much about Mt. Everest on the S.W. side, where its mighty precipices stand guard over the tumultuous glaciers that descend to richly wooded valleys, deep cut through the lesser mountains. There must be gorges of supreme grandeur, where the pent-up waters foam and tumble down to the low-lying lands in Nepal.

Those whose knowledge of the Himalaya is only of the country to the N. of Mt. Everest know nothing of the real Himalaya. Far different are the awful ice solitudes that surround K₂, the Gusherbrum peaks, and the Mustagh tower. There all is one huge snow world, where gigantic Matterhorns and majestic Mont Blancs vie with one another as minor satellites to the stately kings that reign in those far-off marvellous lands. What is there in the Mt. Everest range that compares with the Saltoro towers? Where do we find anything approaching the immensity and sullen grandeur of the gorge of the Indus below Gor, where the waters of that great river have come from a mountain land many times the size of the Alps and from sources nearly a thousand miles away, and have cut through the main range of the Himalaya, forming a rift deep, desolate, and unique in savage immensity? On its N. side precipices rise one over the other for 12,000 ft., whilst on the other are the snows on the summit of Nanga Parbat, 24,000 ft. above the river below.

In one way, however, it is fortunate that the N. side of Mt. Everest is so comparatively tame. For the other great peaks above 27,000 ft., if they gain in grandeur, present such savage precipices and steep glaciers that one despairs of ever being able to win anywhere near their summits. Mt. Everest, on the other hand, presents no such difficulties, and, as we now know, Messrs. Mallory and Somervell climbed to just short of 27,000 ft., whilst Captain Finch and Lieutenant Bruce reached 27,235 ft. with the help of extra oxygen, thus beating the previous record by 2700 ft. Moreover, coolies carried heavy loads to 25,000 ft.

Great things were accomplished by another member of the 1921 expedition, Major Wheeler. Although he was not one of the climbing party proper, yet he made many high ascents.

Unfortunately we have no complete account of all his climbs. Primarily he was concerned with the photographic survey of the Mt. Everest district. In order to carry it out he had to climb up numberless ridges and minor peaks, and must have been many times over 20,000 ft., where, in icy gales that always blow, he for hours often had to wait for the mists to clear away before he could secure the photograph he wanted. He it was who first ascended the East Rongbuk glacier, up which a year later the second Mt. Everest expedition went.

Dr. Wollaston brought home in 1921 a most interesting collection of the flora and fauna of the district. In 1922 Captain Noel obtained a most valuable kinematograph film. Some of the exposures were made at an altitude of 23,000 ft. on the North Col. Those of the events of the journey and of Tibetan dances give one an excellent idea of not only the life of the expedition, but native life as well. Mr. Somervell, not content with climbing, was also artist and musician to the expedition. He has produced some most characteristic pictures of the mountains and the scenery, and has also brought back weird native music that he heard in Tibet.

One of the greatest successes of the expedition was the way in which General Bruce managed to collect transport and deposit successfully all the outfit of the expedition at the base camp. What his feelings were during all those weeks spent at the bottom of the Rongbuk glacier, amidst icy gales, he alone knows; and the persuasive talent he must possess to have collected from the sparsely inhabited district around enough coolies to keep the higher camps supplied is wonderful.

We have gained much valuable knowledge from these two expeditions—knowledge that should ensure success, given moderately fine weather, when the next expedition attempts to reach the summit of Mt. Everest. We now know that with the help of extra oxygen there is every probability that the remaining 1700 ft. of the great peak will offer no great difficulties from the point of view of rarefied air. Moreover, if coolies can carry loads to 25,000 ft. without any excessive hardship, those coolies surely without such loads ought to be able to climb the remaining 4000 ft. without extra oxygen. But great difficulties still remain. The icy winds, and the lowered vitality owing to insufficient combustion in the lungs, both mean increased liability to frostbite. Also, if new snow has fallen, or if the warm monsoon comes, avalanches result, and in size Himalayan avalanches are comparable with avalanches in the Alps as Mt. Everest is comparable with Mont Blanc.

Those who attempt to climb the great peak should have, above all things, an undoubted knowledge of ice and snow. They should know almost by looking at a snow slope whether it is safe or not, and watch for changes of weather with a vigilance far more keen than is customary in the Alps. To be caught by bad weather at such heights as 24,000 ft. probably would mean disaster.

During the early summer the wind in those Tibetan highlands blows all day and every day, often with the force of a gale; it is always from the W., and bitterly cold, but it brings fine weather as a rule. In the early summer the summit of Mt. Everest is moderately free of snow, but later, as we have seen from photographs taken in September, the great peak is white from top to bottom.

It is therefore only in May and part of June that the mountain is in a condition for climbing—a time far too short; but let us hope that the next party will find the conditions more quiescent than they were in 1922.

A word must also be said about other difficulties that, as a rule, one does not hear much of: the difficulties of equipping and organising so large an expedition. All praise must be given to those who spared no trouble in outfitting the expedition. Chief amongst these were Captain Farrar, Mr. Meade, and Mr. Unna. They saw that everything possible was sent out necessary for the comfort of all concerned. Professor Dreyer and others also gave valuable help. And last, but certainly not least, the best thanks of the Alpine Club should be given to Mr. Hinks for the untiring manner in which he conducted all the affairs at home during the last two years. All the correspondence, photographs, making of several maps, arranging lectures, notices in the papers, etc., he has looked after in a manner that not only has been splendidly done, but has also resulted in increased pecuniary benefit to the Mt. Everest expedition.

The JOURNAL has flourished exceedingly under the indefatigable influence of Captain Farrar. It has contained articles that place vols. xxxiii. and xxxiv. amongst the most interesting and most valuable of the whole series. He has also been better than his word. Three years ago, in his valedictory address, he said, 'So long as present prices obtain we must be content with one number a year'; but he has given us two numbers a year, and they grow in size. Vol. xxxii. had 420 pages, vol. xxxiii. 480 pages, and vol. xxxiv. 560 pages. They contain interesting papers on all sorts of subjects.

Besides the papers on new climbs in the Alps and elsewhere Captain Farrar has managed to obtain from the best sources historical articles of great interest and value. To give only a few : ' Early Swiss Pioneers in the Alps ' (Dr. Dübi) ; ' Early History of the Col du Géant,' also ' Narratives of the Ascent of Mont Blanc in 1819 ' (H. F. Montagnier) ; ' The Schlagintweits and Ibi Gamin ' (C. F. Meade) ; ' History of the Alpine Club ' (A. L. Mumm) ; ' Abbot Nicolas on the Alps ' (W. P. Ker). And of course we have had all the articles on Mt. Everest, with an immense number of illustrations, also maps.

The library has been much improved by Mr. A. L. Mumm, who has spent much time in rearranging it with the help of Mr. Mackintosh.

There have been quite a number of alpine books published during the last three years. The most important is ' The Life of Horace Bénédicte de Saussure,' by Dr. Freshfield in collaboration with Mr. H. F. Montagnier. It contains a history of one of the ablest scientific men of the eighteenth century, one whose name also will always be associated with Mont Blanc. Amongst biographies it must take a high place. It is remarkable that the life of so eminent a man as de Saussure should not have been written earlier. But ample justice has been done him by Dr. Freshfield, who has produced a work of which he should be proud.

Next comes ' Mt. Everest : The Reconnaissance, 1921,' by Colonel Howard-Bury, D.S.O., and other members of the Mt. Everest expedition. This record of the first expedition to Mt. Everest is quite worthy of the subject. We must congratulate ourselves that the first description of the highest mountain in the world, and of the mysterious Tibetan country that lies to the N. of it, should be written by Englishmen, and members of the Alpine Club. The reconnaissance of 1921 fully accomplished its task, and let us hope that vol. iii., when it is written, will contain an account of how in the end a member of this Club has won to the summit of that mighty mountain, in spite of the terrible winds, the fierce cold, and all the other entanglements with which the great Goddess of the Snows has with such a prodigal hand surrounded herself.

' Mountain Craft,' by Winthrop Young, and ' Mountaineering Art,' by Harold Raeburn, are books that give delight to all ardent student-mountaineers. Let us hope that the readers will mark and inwardly digest all the valuable material gathered together in these volumes. Written by experts on the subject with first-hand knowledge of all they have

described, they are a most welcome addition to mountaineering literature.

Sir Martin Conway has given us a volume of 'Mountain Memories.' They are quite characteristic of the author. He belongs to the school of the romantics and wanderers. Once, he says, he might have fallen from his high estate and spent the rest of his life in 'shinning' up difficult rocks on obscure mountains, a most fortunate escape, but I do not think that the temptation can ever have been severe.

The literature of the Canadian Rocky Mountains has received a welcome addition in a 'Climber's Guide to the Rocky Mountains of Canada,' by Mr. Howard Palmer. It is a summary of the existing information up to date. At the present time 200 peaks have been climbed in an area stretching over a length of almost 500 miles. But there are still endless others that have never been trodden on by a human foot. When we consider that thirty years ago no peak of any importance had been climbed, that there were no roads, that there was only one chalet—the one at Lake Louise—in the whole of the main range of the Rockies, 200 peaks climbed show that mountaineering has become a recognised pastime in the Canadian Far West.

The Oxford and Cambridge climbers have produced an excellent collection of essays on mountaineering. Let us hope that more will appear shortly.

A most interesting work on the mountain lands in the United States, 'The Call of the Mountains,' by Mr. Le Roy Jeffers, has been published. It deals with almost all the mountain regions in North America, with the exception of Alaska, and it gives one an excellent idea of all the different mountain ranges, and of the wild scenery that can be visited in travelling through them.

Japan is also represented in 'The Playground of the Far East,' by Rev. W. Weston. It is tantalising that that fascinating country lies so far afield.

Mr. A. L. Mumm has brought out the first instalment of the Alpine Club Register, 1857-63, a most interesting volume that must have taken much time and labour to compile.

Another book on mountaineering that ought to be mentioned on account of its dissimilarity to the usual alpine literature, at least as far as its title is concerned, is 'Mountain Madness.' The author is Miss Helen Hamilton. A reviewer of the work says, 'The writer of the book is fortunate to have lived to write it.' We also should be pleased that she has been spared,

for it is a work that as one reads one smiles, pitying the sorrows of a 'mad' mountaineer, who hates to go uphill, hates to be tired and hungry, or to be too hot or too cold.

Last of all we have two interesting volumes, one dealing with the diaries and letters of that pioneer in the Alps, F. F. Tuckett, for the years 1856-74, the other the letters of the Earl of Lovelace (Lord Wentworth). He began his alpine career on the Rigi, in 1847, and climbed steadily till 1901. To give some idea of his energies, in 1897 he ascended the Grépon and at least seven other important peaks.

The Alpine Club has always wished to encourage mountaineering and exploration in the Himalaya, therefore we may congratulate ourselves that in the last few years there has been an increasing number of entries into the Club of residents in India who have gone to the Himalaya for the sake of mountaineering. In Canada, New Zealand, the United States, and Japan, Alpine Clubs exist, but it is remarkable that in India, where there is by far the finest mountain land in the world, there is no Alpine Club. Sixty-six years ago Mr. Johnson, at the suggestion of Mr. Drew, made efforts to found a Himalayan Club, but through want of support and sympathy the club never was started. Let us hope that the Mt. Everest expedition will have the effect of further stimulating the energy and imagination of many of the younger generation in India, and send them to the great hills, where they will find not only health but joys that come from trying one's strength against the great things of the world—joys that run with magic stream through one's veins—for the mountains give to one many and perilous dreams that urge one on to battle with that unconscious strength born of all the confidence and assurance of youth, towards visions of desperate and unknown achievements.

The New Zealand Alpine Club, whose activities were temporarily suspended during the war, intends to again issue its journal. We wish our sister club all prosperity, also health and renewed energy to those splendid pioneers of New Zealand alpine mountaineering who founded the Club. They were real climbers, for they had a great and unknown snow and ice world to conquer, mountains that would tax all the energies of the very best of mountaineers.

This is the last time I shall address you from this chair as President. The time to me has seemed all too short. I hope that the affairs of the Club have been satisfactorily carried on during the last three years. The members of committee have

had much business to transact, one of the most important items being the question of what was to happen at the end of our lease in 1924. Although it is not yet definitely settled, I hope that with the help of Mr. Withers, who is conducting the negotiations, we may be enabled to remain in our present rooms at a reasonable rent.

Besides the help of the committee, I have always had the wise advice of Captain Farrar. No amount of trouble is too much for him to undertake, if by it he can benefit the Club. I doubt if at any time we have had anyone who has had the welfare of the Club more at heart than he has. Also my special thanks are due to the Hon. Secretary, Captain Eaton, and to his diligent assistant, Mr. Oughton. I thank the members of the Club for their kindness and courtesy during my term of office; they have always treated all suggestions brought before them from the committee in a sympathetic manner.

Gentlemen, I hand over the Presidency to General Bruce, my very old friend. We have climbed together in many parts of the world, and I know him to be the best of good fellows. If he can administer the Alpine Club with the same skill as he did the last expedition to Mt. Everest, all things will work with the greatest ease and the Alpine Club will prosper.

SOME ALPINE EXPEDITIONS IN 1922.

By A. C. PIGOU.

OUR Alpine holiday in 1922 was original in one thing: the method of getting to the ground. The party, McLean, Hallward, and myself, were accompanied across the Channel by a five-seater Ford car. Arrived at Dieppe on the morning of July 1, we drove furiously along the good parts, and bumped in agony along the all too extensive bad parts, of certain French *grandes routes*. McLean, to whom I was obliged on occasion to surrender the wheel, has a way with him in the conduct of motor cars that provides fine training for his companions' nerves! However, the only actual casualty that occurred took place while I was in charge. A minute French chicken hurled itself incontinently across our path and met an untimely end. On the evening of the third day, groaning somewhat with a disease that, in the darkness, we could not diagnose, the car climbed up the steep hill to La Grave and halted before the hospitable door of the Hôtel de la Meije.

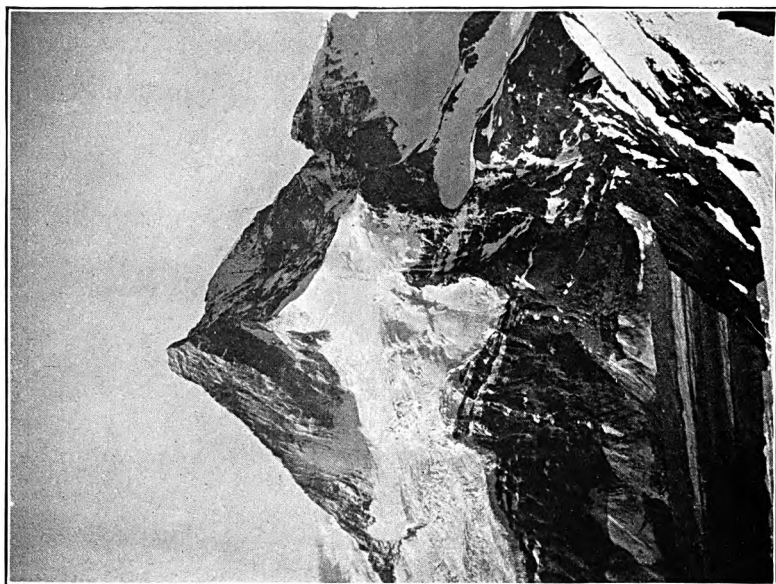
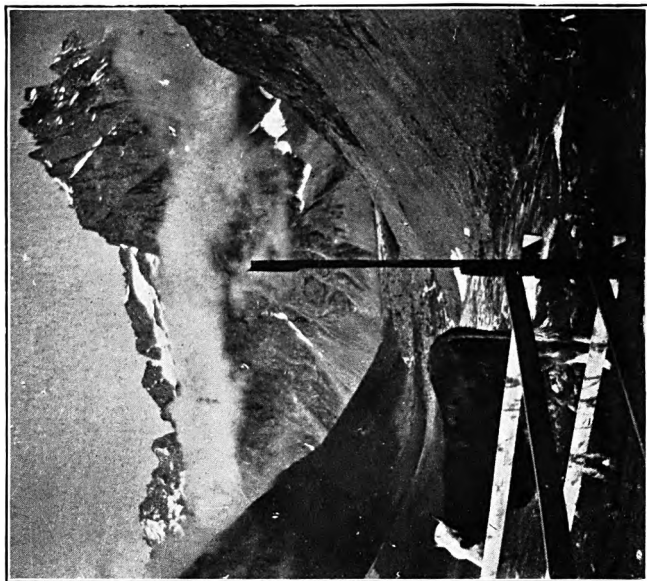


Photo R. Graham.

MATTERHORN.

Showing Z'Mutt arête from Pointe de Zinal.



ROCHE MÉANE

from Chalet de L'Alpe.

Next morning, rather worn with our journey, we wandered along the tunnelled road to look at Villar-d'Arène. The church is embellished on one side with two charming parallel 'chimneys' some sixty feet high, up which Hallward immediately proposed a race; but I, out of respect for the sacred edifice, coupled perhaps with other considerations, firmly declined the challenge. After lunch he and McLean ran violently up a steep place to prepare against the morrow. I, having successfully cured the car of its diseases, claimed a reward in idleness.

The morrow came and, with it, our training climb, the not very stately Bec de l'Homme. There are plainly any number of ways of getting up this mountain. We went to the foot of the Tabuchet glacier, crossed the ridge of the Pic de l'Homme by an extremely rotten wall, and then climbed up the Bec. It was a very bad route, and we took eight hours to reach the top. Hallward survived throughout; McLean suffered a little on the way up; I suffered a great deal on the way down. So ill, indeed, did I become that on the slopes leading to Villar-d'Arène McLean went on ahead to get the car and save me the two miles of road. At last, after being nearly cut off by precipices in the forest, I staggered, under Hallward's escort, into the Villar-d'Arène inn. We had no money, but our trustworthy appearance got us *café au lait*; and, just as our bowls were finished, the faithful Ford, hooting triumphantly, rushed into the square.

When we woke next morning the weather was still fine; so we walked up to the Chalet de l'Alpe—a charming spot, where, for fifteen French francs per day, you are lodged and fed luxuriously. During the night rain and storm fell on the house—a prelude to the season's happenings—but next afternoon it cleared enough to let us bathe in a cold pool, and to tempt upwards a French couple with their guide. My companions spent the evening in dance and song with the lady, while I underwent a discourse from her guide on the rottenness and peril of the Roche Méane, to which we had turned our eyes.

Dawn found us floundering among the horrors of the Casse Déserte. We were learning the inner meaning of the stones of Dauphiné. At last we escaped and, by rubble and snow, made our way to the glacier which divides the Roche Méane from the Grande Ruine. By this time we were none of us fired with the ardour of adventure—particularly adventure among rottenness; so we toiled up to the Brèche Giraud-Lézin for the lesser glories of the Grande Ruine. Even these, however, were not

to be won without an effort. It was difficult to get on to the rocks from the glacier, and they proved anything but firm. However, eventually we attained the summit, after overruling vigorous protests from one of the party, who asserted that the whole mountain was about to fall on us in a single solid block. We came down along a snow ridge leading to the Pic Bourcet, and then easily on to the glacier. Until we arrived once more on the Casse Déserte we were happy. Returned to the inn, we hungrily ordered *café au lait* and omelette, while our host sat down to explain to us in detail the various respects in which we must have strayed from the proper way. The *café au lait* duly arrived ; but there was now present in the chalet a gentleman of great influence, no less a one than the chief of the local police. The admirable omelette on which we had built our hopes was served respectfully to him !

Rain fell in the night and following morning, but the sky cleared later. We decided to go to La Bérarde, and, with the help of the map, chose our route—Pic de Neige Cordier, Col Émile Pic, Glacier Blanc, and Col des Écrins. This turned out a charming expedition, carried through in perfect weather. We hit a good route on to and up the Pic de Neige Cordier and were on the top at 6.50, five and a half hours from the start. During a long halt we watched with vindictive satisfaction the Chief of Police—devourer of our omelette—and his guides toiling and, as we hoped, suffering on the slopes of the Grande Ruine. Crossing the Col Émile Pic, we did not descend directly to the Glacier Blanc, but contoured round above it—a plan that would probably waste time in a less snowy year, but answered well for us. On getting to the Col des Écrins at half-past ten we all experienced a shock—for to our eyes expecting a gentle slope there suddenly appeared an exceedingly steep rock wall. So surprised were we that we doubted whether this was the proper opening, and went off to inspect another one higher up towards the right. But one glance at the tottering rottenness below was enough. We returned to the true col and discovered, of course, that the wall was amply garnished with enormous holds. Fortune continued to favour us. We found a good bridge across the bergschrund, and then, descending the Bonne Pierre glacier, by pure accident struck the top of a moraine, along which has been constructed an admirable path leading down to La Bérarde. We reached the hotel in time for tea, after a charming and varied day.

Our hopes of making the first traverse for the season over the Meije, which that day's sunlight had warmed, were

shattered next morning by a return of bad weather. Acting on the principle that it is a mistake, in a doubtful season, to wait about for big peaks, we resolved, if it should prove possible, to go back next day to La Grave across the Brèche. But, before that enterprise could be attempted, there befell us a great adventure. A sergeant of gendarmes invaded the hotel and demanded our passports. These, thinking no evil, we had left in our bags at La Grave. A terrific storm broke. We might be Allemands; we might be Bolsheviks: the doors of the gaol were opening for us. Fortunately a French visitor at the hotel took up arms in our behalf. With wild gesticulations the battle raged over our heads. Our champion carried the war into the enemy's country with an original argument. Why, he cried, to carry a passport across the mountains, so far from being the right thing to do, would be an act of madness: an avalanche might carry the sacred document away, and then where would its unfortunate owner be? But the sergeant did not flinch. He too, he shouted, was an Alpinist—had he not made the traverse of the Meije? Did he not know that, if an avalanche were to carry off the passport of a voyageur, it would in all probability carry off the voyageur also?—and of those buried upon the mountains passports were not required! Suddenly the storm, in the inexplicable manner of French storms, died down. For us there was no reproach—we were undoubtedly 'braves gens'; but it was the safety of the Republic that required these precautions. Let us remember always in future that, on the soil of France, the passport and the man should never in life be divided!

Nobody called us next morning or prepared for us any food. Nevertheless we were off at four, walking through a thick cloud. For a few moments the sky cleared and we saw the splendid, though whitened, bastions of the Meije. But at the Brèche snow was falling thickly, and there was a very dense mist. We hesitated a good deal about descending an unknown glacier in these conditions, but finally agreed at least to make a start. After we had gone down some way, one member of the party, on the basis of much book-learning, directed us steadily on a line towards the left and *upwards*! We submitted patiently until this route brought us immediately beneath a row of towering séracs. Thereupon revolt broke out. We resolved that in a fog the value of book-learning is limited, and that, if one wishes to descend a glacier, it is advisable to walk down, and not up. By acting on this simple rule we came before very long to the top of the Enfatchores rocks. The snow

stopped and the sky cleared, and, in spite of sundry wanderings from the best way, we reached in due course the Hôtel de la Meije. There the 'braves anglais' were loudly acclaimed for their heroic venture, and regaled themselves with tea.

At this point in my narrative I am tempted to a brief excursus. On the Enfetchores rocks we encountered three Frenchmen from Grenoble. Two of them were competent climbers, but the third, who was carrying a portentous load, had never—so they told us, and so his movements suggested—set foot upon a mountain before. This unfortunate young man was continually in difficulties—he might have killed himself at any moment—and yet the party did not rope. No doubt a local guide perfectly acquainted with the district could have found a route down these rocks where anybody, however incompetent, would be safe. But an unguided party is certain, from time to time, to get into places from which a novice may easily fall. And yet, if that novice is a spirited person, he will hate to ask for the rope; he will much prefer to undergo mental discomfort and physical danger. Surely there is an imperative obligation on his more experienced companions not to allow this to happen, and to shoulder whatever inconvenience there may be in roping too soon rather than too late. After all, we climb for amusement, not to provide illustrative material for students of natural selection!

In the ordinary course the journey from La Grève to Chamonix would be a wearisome affair of two days. For us in our car it was a very pleasant ride. Starting at about nine in the morning, and travelling by Grenoble and Albertville, we topped the hills overlooking St. Gervais at sunset, had a marvellous view of the southern part of the Mont Blanc chain, and reached Couttet's in time for a late dinner. It was now July 13. For the next three days it rained and snowed. We spent them in going by train to Zermatt and in watching, in lucid intervals, the mountains growing steadily more white. On the 17th, however, things improved; so next morning we left the Monte Rosa hotel at one and started, with no very definite objective, up the path to the Trift. As we passed the hotel we saw three parties girding themselves. After we had laboured for some time through the snows of the Trift glacier and were breakfasting, they passed us, all bound for the Wellenkuppe. Henceforward the work of snow-ploughing would be theirs and not ours, but, none the less, the idea of tramping behind them did not greatly attract us. The face of the Trifthorn was covered with unstable snow, but we thought

it would be possible to ascend the Triftjoch gully and climb the mountain by the ridge. However, we judged unwisely. When, after incredible toil, we had got half-way to the Joch, a snow avalanche poured down the gully, turned me over, and carried me down towards my companions, who were luckily out of the direct line. This was not good enough. When I had been extricated we returned as quickly as we could to the glacier basin. Then a debate arose. We had spent a considerable time upon our unsuccessful enterprise; the sun was very hot and the snow very soft. None of us, we agreed, *wanted* to walk up to Wellenkuppe, but one of us, with that spirit which has made England what it is, felt that honour required us to do so. At length by a majority of two to one it was decided to retire: the party of idleness, *quorum pars magna fui*, had vanquished honour!

Our experience on this expedition made it plain that no high mountains would be accessible for some days. We therefore planned to journey to Chamonix by the High Level Route, climbing anything that offered on the way. To this end we went next afternoon to the Schönbühl hut. Arriving in light snow, we found four students from Leipzig dug in and waiting, rather foolishly we thought, for the Z'Muttgrat. They told us that a month's climbing in Switzerland cost them 40,000 marks apiece. For the Col d'Hérens and the Col de Bertol next day we had brilliant weather. We avoided the actual col on the first of these passes, fearing that it would treat us as the Triftjoch had done, and crossed higher up over a steep shoulder of the Tête Blanche. The deep snow made the going rather laborious, and we took fourteen hours to reach Arolla. On such occasions McLean and I are fortunate. The relative weights of our party are such that, if he or I go first and make the steps, Hallward, following behind, always sinks them a second stage. If, however, *he* goes first, the steps are at once founded on the solid centre of the earth. The practical moral is obvious, and, such is the heroism of youth, Hallward himself actually enjoys applying it!

The day of rest that followed these labours was spent in inspecting a grass tennis-court—undoubtedly the worst in Europe—of which the Hôtel du Mont Collon has become the proud possessor, in climbing the Dent de Satarma, with its slippery top, and in bathing in the blue lake. These enjoyments prepared us for the next stage of our journey. Starting at 3 A.M. we crossed the Pas de Chèvres and reached the Col du Mont Seilon at 8 o'clock. The weather looked doubtful, but,

with the help of deep tracks made by a party the day before, we climbed up and down the Mont Blanc de Seilon very easily. It never occurred to us that the proper way to get to Mauvoisin from here is by the Glacier Lyrerose. We set off, therefore, in the direct line down the Glacier de Giétroz. Getting off on the right bank below the icefall, we had the satisfaction of seeing a herd of chamois, but the annoyance of finding ourselves cut off by cliffs. We were obliged to cross to the other side of the glacier under dangerous-looking séracs. Lower down we found some chalets possessing excellent milk, and the top of a winding path that took us down into the precipitously walled Mauvoisin valley. We reached the hotel at 6.15, just as rain began to fall.

The third link in the High Level Road was unfortunately denied to us. Rain on the following morning delayed our start for the Panossière hut till 3.30 p.m. Then, after toiling up some very steep slopes, we lost the path in a fog. It was getting late ; to suffer a night out in searching for a hut would have been excessively annoying ; we abandoned the attempt and went down to Fionnay. The result was the loss of our expedition. Had we been at the hut next morning we could have got across the Col des Maisons Blanches. But by the afternoon, when we did arrive there, it was snowing hard. The snow continued all night, and, though at 8.30 next morning we made a start up the glacier, the fog and falling snow made it impossible to see anything, and, after a couple of hours, we were compelled to come back. We had not provisions enough for another night, so could not stay longer in the hut. We walked down by Fionnay and Lourtier towards Sembrancher, discovered, a few miles before arriving there, that on foot we should miss the Martigny-Orsières train, chartered a motor-car, and, with the combined help of petrol and coal, sat down to dinner in Orsières.

Recovered weather gave promise that the fourth and last link in the High Level Chain could be fashioned. The march to the Saleinaz hut, a fairly laborious one, was achieved in the course of the next day. From there we had hoped to traverse the Aiguille d'Argentière, but Maurice Crettex, whom we met in the hut, and who had made an expedition that day, assured us that the snow would be unsafe. We then thought of taking the Grande Fourche on the way to the Col du Chardonnet. It transpired, however, that some twenty persons proposed to attack that mountain, and we did not wish to be killed. In the end, therefore, we resolved to go direct to the col and see if anything could be done from there.

Starting at 2.15, we had crisp snow on the glacier and magnificent sunrise views. At the col it was obvious that neither the Aiguille d'Argentière nor the Chardonnet was fit to climb, and we came straight down to Lognan. The year before we had entered that hostelry at a like early hour after spending a gruesome night on the other side of the glacier. When he saw us now, M. Simon at first suspected that we had repeated that experience. However, our contentment with two eggs each in omelette form, in contrast with our demand then for six, won credit for the simple tale we told him. We walked down to les Tines through the woods and took train to Chamonix and to Montanvert.

A day of pouring rain and snow put all high ascents out of court. Sitting in idleness at the hotel, we planned, therefore, for the morrow a little expedition that turned out very successfully. Starting at six, we mounted by the Glacier de la Thendia to the Col d'Etala and traversed first the Petits Charmoz and then the Aiguille de l'M., returning by the slopes of the Crête des Charmoz. These last slopes are detestable, but the ascent of the Petits Charmoz from the Col d'Etala, if one sticks faithfully to the ridge, is a charming rock climb. The whole expedition took eleven and a half hours. We recommend it strongly to anybody who finds himself at the Montanvert when the high mountains are snow-bound.

The day had been sunny, and it seemed possible that the Requin would now be clear enough to climb. With this idea we started next morning at two ; but a loss of time and temper in getting on to the Mer de Glace, a sight of the whitened upper rocks of our peak, an error as to the way, and, above all, the thought of the sun-smitten glacier snows that lay between us and the rocks, drove us to substitute the Tacul. Two of us had been up this mountain before, but, even so, we missed the easy chimney at the top and had to fight our way up a rival and much more strenuous one. On coming down we found the snow slopes leading from the rocky buttress on the right of the Glacier des Périades to the middle of that glacier in a curious condition. By kicking about a little at the top we caused the whole surface to peel off in great strips, but below there was not ice or even very hard snow. When the avalanches had subsided we walked down very comfortably in the road they had made for us.

That evening we were joined by a new companion, M. V. Dixon. After a day's rest we climbed the Blaitière, just opened for traffic by another guideless party. To judge from the

appearance of the tracks they must have had very hard work. By dint of taking off our coats we just succeeded in squeezing through the narrow groove that leads to the top of the centre summit. As we were coming down—after McLean, stimulated by my ice-axe, had climbed up our spare rope at the Rocher de la Corde—the sky suddenly darkened, and our journey down the ridge was made in falling snow.

After another day's rest we crossed the Col des Grands Montets *en route* for the Aiguille d'Argentière. That mountain we ascended by the ordinary way in eight hours. There was a cold wind, and the rocks near the top were in bad condition, but there had been a party up recently who had cut steps in the ice. For variety's sake we came down by the ridge leading to the Col du Chardonnet. There was a great deal of powdered snow on the rocks and a considerable ice slope to cut down. Shortly below this, about half-way along the ridge, we turned off down a rather rotten gully on the left, and, by that and a steep snow slope, reached the Glacier du Chardonnet. Though only one stone fell as we were coming down, I doubt if the route is a safe one. On the glacier we made a snow-ice out of a tin of peaches and enjoyed ourselves very much.

Next day, August 5, McLean had to go back to England. After bidding him good-bye in Chamonix, Hallward, Dixon, and I went up a second time by train to the Montanvert. It rained as we went up, and continued to rain during the night; but at 6.30 things looked better. We crossed the Col du Géant—this year extraordinarily easy—and reached Courmayeur at half-past five in the afternoon. Next day it rained again as we walked up to Pertud. When we got up at two the morning after, with designs on the Aiguille de la Brenva, a fog of unpromising appearance drove us back to bed. By nine, however, the sky was fairly clear, and, true to our policy of not waiting about, we crossed the Col de la Seigne and the Col du Mont Tondu, reaching the Pavillon de Trélatête some ten hours later, just in time to escape a terrific thunderstorm.

This storm preluded another impossible day, devoted to idleness and the very excellent fare which the Pavillon provides. Thereafter the skies cleared once more, and we set out at 3 A.M. for the Aiguille des Glaciers. Imitating Bicknell's party of two years before, we did not go to the col, but climbed directly up a rib some way to the left of it. However, as the upper part of this was covered with hard snow in which steps had to be cut, it is doubtful if we saved much time. The walk along the snowy ridge to the final rocks was a very fine one, and the view all

round magnificent. When, however, we came to the rocks of the North ridge we found them plastered with ice, much as the rocks of Great End are apt to be plastered at Easter. There was also a fierce wind, which blew small lumps of ice down on us. A short effort convinced us that the top of the mountain was, for the present, padlocked. We regretfully retired, this time going via the Col des Glaciers, and got back to the Pavillon a little after four. Then, intending to climb again next day, we went to bed for two hours before dinner.

The expedition that followed was the most interesting accomplished in our tour. From 8 to 7.45 A.M. we were occupied in climbing the Aiguille de Béranger by the ridge looking down on Contamines. Thereafter we passed on to the highest summit up the Dôme de Miage by a narrow snow ridge and along soft slopes. Arrived there a little after ten, we traversed all the other summits of the Dôme to the Col de Miage. This journey, which took rather less than four hours, is a most attractive one; the ridges are beautifully fashioned and sometimes very narrow; one feels remote from all the world. A growing wind and the sight of clouds gathering around and below added an element of excitement. We stopped for a meal on the col, and watched two Swiss youths, whom we had met before, completing the traverse of the Aiguille de Bionnassay. Then we walked down the rotten rib that leads to the French Glacier de Miage, found a way off it, crossed the glacier, and eventually got down to slopes of grass. There a roaring torrent barred our way. Hallward, a long-jump expert, leaped lightly among its swirling chasms, but Dixon and I, in spite of the help he gave us, made a very wet and undignified passage. Milk at the chalets cheered us for the final walk to St. Gervais, where we arrived at eight o'clock. Basking in a dream of hot baths, we were infuriated to be turned away from one hotel after another, all of them declaring themselves full. The sight of a motor-car gave us an inspiration: we begged for a lift to Le Fayet; and there, despite the late hour and our bedraggled appearance, the Hôtel des Alpes afforded us, not only the much-desired beds and baths, but also a very excellent dinner.

Once again the gallant army set out and delivered an untended, furious, and quite unsuccessful attack on an impossible part of the Charmoz face. Then, three days after the Miage expedition, Hallward and Dixon returned home, and I was joined for a little while by P. J. Baker. On the morning after his arrival from England we started at a quarter to six and climbed the Grands Charmoz. Two days later, he, Clapham,

and I walked up from the Montanvert to the Torino refuge, and, after portentous draughts of soup, the two last of us continued over snow, rubble, and ropes to the top of the Dent du Géant. That evening we were richly rewarded by some astonishing views of Mont Blanc as seen through wavering mists. On the way back from the col to Chamonix we had hoped to climb the Requin, but the somnolence of one member of the party delayed our start next morning till 7.30, bad route-finding on my part lost us further time, and we were compelled to let slip the prize. After a day's rest, Baker and I then tried to get up the Grands Charmoz by the ridge from the Col d'Etala. But we destroyed our chance by approaching the col from the Nantillons side and wasting hours of time. When, after great difficulties, we got to the col, it was too late to think of the Grands Charmoz and we had to be content with the little one. On our ascent to the col there is one spot which I vividly remember, and which I do not propose to revisit: a sort of through route at the top of a 20-ft. chimney. This through route tempted the explorer, but, when he had entered a certain distance, his progress disturbed a number of large stones above him. In consequence of this disturbance it was impossible for him to do what he earnestly desired, namely, to return by the way he had come—because, if he had done so, the stones must have followed and landed upon his head. Consequently, with infinite pain, he was compelled to go forward, forcing the stones to pass down between his body, which completely filled the hole, and the rock—a process occupying some forty minutes of agony and objurgation. But over events like these self-respecting mountaineers should draw a veil. Consolation and healing were found in the blue waters of Annécý, to which the indomitable Ford carried us, in torrents of rain, away from the storm-swept hills.

AN ADVENTURE ON THE DENT BLANCHE.

By G. M. BELL.

[Read before the Alpine Club, June 6, 1922.]

NEVER before at the end of June can the inhabitant remember to have seen the glaciers so bare and so seamed with unusual crevasses, the snow slopes and gullies turned to such sheets of ice, the rocks so free of winter snow, as in the dry year of 1921. 'Cette année il ne peut pas pleuvoir'—

that was the opinion of the guides in the Valais, who would go gaily to the hut in the afternoon under threatening clouds, certain that before dawn they could start with a clear sky. It was a year for the rock-climber, who found the cracks and chimneys free of verglas. The glacier needed more step-cutting than usual; the snow couloir proved to be clear ice; and stones falling from rock-face or steep glacier under the fierce sun were an unusual danger. Down below the valley streams overflowed their banks day after day as the snow above yielded to the heat.

The guides selected for this expedition were two local men of the valley, Jean Gaspoz and Joseph Georges, who had been companions in arms with me in previous years. In 1913 it had been a point of honour, in anticipation of the war, to reach the last summit on the traverse of the Aiguilles Rouges at Arolla before a boastful German with two alien guides from the other hotel. It was neck or nothing, and we won by the neck. In 1919, when on the way to the Matterhorn by the Col de Sion, Georges and I had embraced the earth and each other together near Euseigne, having been violently deposited there from a haycart by a bucking mule, unused to anything but military service. Later in the day, after a fifteen miles' tramp on the dustiest of roads, he had easily worsted me in a beauty competition at a Visp hotel. At the bidding of her mistress the chambermaid conducted the guide to a sumptuous room on the first floor, while I, with a new sense of modesty if not with shame, proceeded to go up higher to the fourth. In 1921, a week before the present expedition, he had shown his initiative by leading in the first ascent of the N.W. arête of Mont Collon¹; we had watched him then from the hotel terrace cutting for three hours up an ice-slope of 60 degrees in the late afternoon, to reach the top of the mountain after 7 P.M. Gaspoz this year was also a glutton for work. While we two toiled up the steep glacier to the Bertol Hut on this blazing afternoon of July 27, he was completing the familiar traverse of the Pigne, and joined us only after dark, the last of a long string of its occupants, some of whom, in defiance of regulations, continued to 'circulate in boots of ascension' as they took their places in the queue of hopeless aspirants to the cooking stove.

Over that night I draw a veil. At least we were spared the experience of one some years before in the Invergnan chalets

¹ Cf. *A.J.* xxxiv. 478.

above Cogne, when confidence in the ability of one's skin to resist intimate personal attacks was rudely shaken by the cry of triumph 'I've got 'im!' which echoed through the rafters from a distant fellow-sufferer. But when all, with a prospect of an early start, are sleeping for their lives, to snore is human, to forgive divine.

From whichever side you approach the Dent Blanche in order to ascend by the ordinary way of the South Ridge, you must serve a long and weary apprenticeship of three or four hours on the *névé*—soft and yielding on these frostless nights—before you reach the Wandfluh and are free of the ridge itself. From the Bertol Hut, left at 1.10 A.M., circulating round the undulating rim of the great Ferpèche glacier we came on the moonlit morning of July 28, and at 5.30, after having seen the day flush upon the Matterhorn and Dent d'Hérens, paused by the col for a meal; then, leaving one rucksack in cache in the rocks, we attacked the ridge and were away for the summit, Gaspoz leading. It was all straightforward to-day. Others, climbing recently, had left traces which simplified the step-cutting needed on the ice-ridge. The big gendarme, a noted obstacle under different conditions, was turned on the west, and gave us some minutes of strenuous endeavour, but no anxiety; and as we came back again to the arête and saw above us the delicate snow point which marks the first top of the mountain, all, except a growing disinclination for exertion at this height (now nearing 14,000 ft.), seemed to belie the traditional difficulties. Yet we knew how few are the days, even in fine weather, when the Dent Blanche does not wear her wreath of mist accompanying an icy wind, which in a few minutes may turn victory into defeat. . . . 'Eyes front': admire the marvellous view to right and left when you stop, but not as you tighten the rope to cross gingerly a knife-edge of snow-capped ice, because the eye, once off the immediate front, rests on nothing till it penetrates to the glacier 3000 ft. below, or to the Pointe de Zinal beyond it, from which seems to come now and then strangely the hail of a human voice. Out of breath somewhat and abominably hot, we reach the first summit, opening out, beyond the hundred yards to the rocks of the second, the long ridge of the Weisshorn, gleaming in the sun.

A few minutes, and at 9.30 we are on the top admiring the wonderful array of peaks and passes and glaciers all around us in the Pennine, Oberland, and Graian Alps. The inner man welcomes refreshment, and an alpine chough circles round,

poised in space, waiting for what is left. A heat haze veils the horizon, and the refraction from snow and ice in the prevailing stillness makes us welcome the idea of making up for the sleep which we had missed in the hut. So we secured ourselves by the rope from falling out of bed into Nirvana, watched for a moment the progress far below on the ridge of a party which had started an hour after us, and then composed ourselves to sleep.

It was a queer sensation to open one's eyes later incredulously on the blazing expanse of peak and glacier seen between one's feet in what seemed an infinity of space, when the waking mind expected the narrow compass of a room's four walls. It was just as well at that moment that I was tied to the rock behind, for the impulse was to rise and cut short what seemed an incredible dream. The time had gone quickly: it was 11.30, and though the others had not arrived, we must be going. But which way? Why not descend the direct Ferpèche arête? True, neither guide had ever been down it; but Gaspoz had ascended it years ago, and he jokingly promised us beds at Bricolla or Ferpèche instead of the long tramp over the soft snow and another night in the crowded hut. Besides a traverse, especially this one, was more worth doing than a return in our steps. We listened and agreed, for we did not recognise in his plea the soft enchantment of this mountain Circe who had entrapped us. Sorely was she to repay us for thus under-rating her difficulties and her dangers. Even now, though we did not know it, she was gathering a store of stones and ice to fling at us treacherously as we descended her flanks. Looking back, I am convinced that the guides lacked in judgment in making this suggestion (which did not emanate from me). Stones must always fall on this face in the afternoon, and more especially when the couloirs are ice: and it is not easy to keep entirely to the main ridge. However, the decision was made: at 11.45 we drank a last stirrup-cup and turned our faces to the W., Gaspoz leading and Georges bringing up the rear.

The first few steps of the Ferpèche arête are sensational enough: there is not room for one's foot on the top of the knife edge of snow, and below this is ice. Each foot set cross-wise you fox-trot to the haven of rocks beyond. The Arête des Quatre Ânes descends similarly, as we had seen from the top, on the other side, and continues this tight-rope business, varied with cornices, a good way down. On our side the rocks emerge sooner, and for a time present no special difficulty,

though they become increasingly smooth and are set with strata pointing downwards at an angle of 45° . One place, however, I remember, about an hour from the top, where a weather-beaten end of rope fixed and cut short showed the straits of a previous party under probably more severe weather conditions. We managed to turn this precipice on the right without adventitious aid. Then ensued a variety : for we were forced off the main arête of the mountain on to a subsidiary ridge to the left, reached by cutting down an ice-slope, on which we steered for such knobs of rock as provided resting-places. Having reached a fancied security, we began to descend an interminable series of slabs, sloping outwards and rounded, where holds were few and far between. The point of the axe set in cracks which the foot could not reach proved extremely useful, the seat of one's breeches sometimes even more so : only the state of my woollen gloves reminded me after a time that there may be limits even to the resisting power of Harris tweed when in contact with rocks.

So we progressed slowly but surely, noting the arrival and departure of the other party on the S. ridge, till at 3.30 we had come down some 1,800 ft. The ridge we stood on was bounded on either side by couloirs filled with ice, inclined at an angle of 40° , and separating us from higher ridges which curtailed the view N. and S., though in front we looked across the tiers of the Ferpèche glacier to the Aiguille de la Za, which seemed about on a level with us. Down the iced gully on our left poured a stream, sometimes only of water, but more often of ice and stones, which fell with an alarming swish and roar, the stones ricochetting from side to side of the couloir with the velocity of bullets, and reaching sometimes unpleasantly near us. On the right was a narrower gully of similar aspect, where the hate was less continuous, though an occasional ping or crump reminded us that the enemy was only biding his time. It came : for Circe, who had lured us down this only available ridge, took care that at this point it should become perpendicular, so as to force us to one side or the other. 'Rien ne va plus.' There ensued an increase of that abominable patois, a mixture of French and Italian and double-Dutch, which is an infallible sign of difficulty or danger. At last we decide that the only thing to do is to descend into the right-hand couloir and trust that the bombardment will hold up for the time. Gaspoz descends, not happily, for he has lost by now some of the front nails from his boots, and this piece has to be done face to the wall and with great caution. The



WESTERN FACE OF DENT BLANCHE.

landing below is on a steep ice-slope. Arrived there he cuts a few steps, and then, to diminish the time during which we must all be exposed to the stones, unropes and continues cutting hastily round the curve of the gully, here perhaps 50 ft. across, to the comparative safety of the other side; while I descend crab-wise as he has done, to the ice, where I am almost at the full length of the 100 ft. rope. Joseph Georges above cannot see much, but he has a good position and sits glued to the rock—just as well in view of what now happened. ‘Venez ici à moi, Monsieur,’ says Gaspoz, and I proceed obediently along the ice-steps towards him. Reaching the middle where a considerable stream is coming down, with small stones in it, my haste to cross on the small steps results in a slip. In a flash I am swung round on the ice like a pendulum, and the side of my head meets the rock casing of the gully 15 ft. below. The rope held. ‘Are you much hurt, Monsieur?’ ‘No, it is bleeding a bit, but it is nothing serious.’ Fortunately so, for, as our subsequent difficulties showed, disablement at this point would have presented a very serious problem. My axe reposed on a ledge some 60 yards below. Gingerly I crawled along the side upwards again, and at Gaspoz’s bidding proceeded to make another attempt to cross. I was not very willing, feeling shaken, and seeing that the danger lay more especially in the middle of the couloir. But Gaspoz thought not only that it was safer on the other side, but that a ledge a little below in the red rocks on that side might lead us beyond the ridge to an easier way. (This he afterwards tried by himself, but without success.) As I proceeded carefully towards him Gaspoz left his axe behind and came to help me. But the meeting near the middle was too good a chance for the enemy to miss. The mountain loosed a stone, the size of a cannon ball, which hit me full—fortunately on the place reserved by nature and schoolmasters for chastisement. The shot told. Once again I flew round and down, but this time (having had practice) swung round and met the rock face with my hands. Gaspoz being unroped was like to be killed. He descended like lightning down the slope, but was brought up by a slight turn of the couloir 60 yards below, close to where my axe had previously lodged. But it was not the way he would have chosen to recover it. He had saved himself at the expense of some damage to his fingers in trying to arrest himself, and now cut his way up again on the other side. He was still urgent that I should cross, but after beginning another attempt I decided that his arguments were not so convincing

as the blows I had received, and called on Georges above to descend. What he, receiving intelligence by violent pulls on the rope, had thought of I do not know. At the first slip he called out sympathetically : his silence at the second was blasphemous.

He now came down to join me, slowly and with the care which the place and circumstances demanded. A camera would have disclosed me meanwhile trying to hide my diminished head ostrich-like behind a projecting rock to avoid the rain of small stones from Georges above and the chance of an occasional larger one from the desultory bombardment in the couloir. It was probably not more than a quarter of an hour that this cramped and undignified position had to be maintained, but it seemed an age. Then at last I was free to move gingerly downwards. A little below the slope eased off and the ice had melted away. For 100 yards we were still within range of the guns, we on the left and Gaspoz on the right of the couloir ; then a traverse to the right along an opportune ledge above a very steep pitch took us out of danger. True it involved passing immediately beneath a copious waterfall : but there are times when a douche has its compensations.

It was after 5 o'clock and we were still high up. Below us stretched still an interminable series of smooth rounded slabs, requiring not so much climbing power as concentrated care and attention. Gaspoz prospected some way in front for general direction. We followed, but moving only one at a time, and it was slow work. At one place we expedited matters by using the bed of a considerable stream—which is not a way of keeping dry. At last, joining forces again, we got below the precipices to shale and debris ; a jump of 10 ft. down and 6 ft. outwards landed us on the farther side of the bergschrund, at the only possible crossing point. Earlier in the afternoon this would have been also the high road for all the missiles from above, a heap of which had partially choked the crevasse, while the rest was obvious in avalanche debris below. Now all was still, for the sun had long gone down.

It was 8 o'clock ; and though our immediate troubles were over, it was this—the lateness of the hour—which disturbed our peace. We were only on the high subsidiary glacier which is perched above the Ferpèche glacier. Along this, if we could see our way through the crevasses and over snow-bridges, lay the road to Bricolla and bed. But a very few minutes across the glacier westwards showed that this would be impossible

in the failing light. The lantern, with all our remaining provisions, reposed in the sack we had cached on the S. arête. The only thing to be done was to try to reach this by descent and reascent up the lower glacier, and so back to the hut. The distance was not very great. All depended on our being able to see and cope with the difficulties, not great by day, of the rocks and ice. So, the decision made, two narrow snow-bridges were successfully passed to reach the rocks, which by now were no more than a dark line stretching to right and left of us. Georges went on to prospect. After a bit he whistled, and we followed. But I cannot say that during the next hour I shone. Weariness and hunger contended with the urgent representations of my companions that I should proceed with all speed. Try it—this moving on unknown rocks set at a steep angle, in darkness mitigated only by the mocking twinkle of the stars. What appears flat is round; a solid stone gives way as you step on it; your boots, which you thought were nailed, turn out to be fitted with skates. A small end of candle lit for a moment at doubtful places only made the uncertainty greater afterwards, and it was not long before this burnt Gaspoz's fingers and produced unparliamentary expressions as it fell. 'Avancez seulement, Monsieur.' 'Où donc?' 'Par là.' 'Glissez seulement: je vous tiendrai.' But I have a strong objection to slipping, even when the rope is well held. After a bit it became obvious that progress without the lantern was dangerous. Reluctantly the guides acquiesced, and we planted ourselves, with room to sit and no more, to wait till the moon rose. It is not more than cool, and there is no wind; fortunately, for we are all rather wet.

We are seated in the gallery of an immense theatre. Far below on the stage the crevasses of the Ferpèche glacier loom dimly, edged by a black cliff, over which at times an ice-avalanche falls thunderously. Above, ridge of rock alternates with tier of ice, and the high, jagged crest dividing us from the Val d'Hérens is shown up in black relief every few seconds by the flashes of a number of distant electrical storms, for all the world like so many revolving lights on a line of sea coast. Far down to our right a single light at Ferpèche is the only sign of human existence in a circle of landscape embracing a hundred miles. It is very still.

So, with a smoke and an occasional drumming of the feet, the minutes pass into hours. At last a dim light on the peaks denotes that the moon has risen in the S.E., and slowly the bright patch widens and the shadow of the Dent Blanche

draws in towards us. But it will be long before the moon shines on the glacier below. However, at 12.30 A.M. we make a move, after some exploration made by Georges. Another half-hour on the rocks, involving the passage of a *mauvais pas* more felt than seen, of some big boulders, and a curious deep cleft in the solid rock, and we are on the edge of the lower ice. We descend in the half light to an evil-looking hole, and approach in its depths an ice-bridge which has fallen from above and lodged again. Georges in front taps and cuts and tinkers while we wait behind on the rope. 'How is it, Joseph?' 'If Monsieur can jump a metre and a half, we may be able to reach the other side.' But Monsieur revolts: he has not at midnight sufficient philosophy to justify a leap in the dark from the known to the unknown; for once he prefers, with political wisdom, to 'wait and see.' And so once more we compose ourselves to patience, while the moonshine creeps nearer and the lightning winks. Shelley's lines are not inappropriate:

'The cold ice slept below:
Above the cold sky shone:
And all around with a chilling sound,
From caves of ice and fields of snow,
The breath of night like death did flow
Beneath the waning moon.'

At 4 o'clock, with the approach of day, Gaspoz went off to prepare our passage by cutting steps a hundred yards lower down than where we had tried before. I awoke from a doze and watched him working his way down the ice-slope. I rubbed my eyes. For there, a yard above him, seemed to stand a figure in white as if watching over him. I called to Georges by my side to look; but he was asleep, and I forbore to wake him. Later, when I mentioned it to the other, who is a religious-minded man, he accepted the idea that it was his guardian angel whom I had seen. And perhaps it was true. At such times one may have unusual vision, though I am no believer in the modern vogue of spirit-finding.

Before 5 we were off again, refreshed by the rest in the cool air, but vastly hungry: for a few stray peppermint tablets, which I discovered in my pocket, did not go very far, and we had been out 28 hours. However, progress was rapid once we had passed the bridge over the big crevasse. Up and up we mounted without difficulty till we rejoined our former route by the Wandfluh and recovered the rucksack. Then, moving rapidly along our old tracks, we paused for half an hour in the

first sunlight to eat and drink, nearly falling asleep afterwards ; and went on, reconciling ourselves to a steady plug through the soft snow. An hour before we were due at the Col de Bertol the weather showed signs of change. A strong wind sprang up, the outlying breath of a big storm which swept over France. In a short time the top of the Dent Blanche was enveloped in cloud, and lightning flashed from it. As we toiled up the last steep ascent to the hut, the wind blew fiercely and rain began to fall from a black cloud overhead. The luck of the weather had held just long enough ; and after 32 hours we were back at 9 o'clock in a haven of rest. One thing alone disturbed the temper and equanimity of Georges, the younger of my two guides, who during all the long descent of the previous day had been our sheet-anchor, and with perfect sangfroid the leader in the dark hours. As we reached the door of the hut a freak of the wind whirled his hat from his head down the rocks and deposited it in a deep crevasse below. Even on the mountains 'there's many a slip. . . .'

In 1922 I made an expedition with Pierre Maurice and a friend from Ferpèche. We cut up the higher glacier (which took a long time) to the bergschrund of the W. ridge, and then followed the traverse across the glacier and rocks done the year before in the dark. We tried incidentally to discover another way off these rocks higher up, but after trying for an hour had to come back and follow the route of 1921. Joseph Georges did a good piece of guiding then in discovering it at 12.30 A.M., with no lantern and a thin moon just risen. There was no other way, and this, even by day, was not particularly easy. The whole expedition, Ferpèche to the Bertol hut, took 13½ hours, but the afternoon snow in the long plug back was very soft.

Details.

[July 28, 1921.—Guides, Jean Gaspoz and Joseph Georges de Pierre of Haudères : left Bertol hut, 1.10 ; breakfast base of Wandfluh, 5 to 5.30 ; top of Dent Blanche, 9.30 ; began descent, 11.45 ; accident, 3.30 ; reached bergschrund, 7.50 ; rest on rocks above lower glacier, 9.40 P.M. to 12.30 and 1.30 to 4.40 A.M. ; regained hut, 8.55. Both guides did exceedingly well in trying circumstances.—G. M. B.]

THE NORTH-WEST BUTTRESS AND TRAVERSE OF THE MÖNCH.

BY H. J. HEARD.

[Read before the Alpine Club, February 6, 1923.]

THE ascent here described was done as long ago as 1897, and there is one ground and one ground only for this paper, *i.e.* that some one will be stirred up to do justice to the range and district. I consider that the Oberland has been shamefully neglected by climbing men. Few know it as it deserves to be known, for I do assert that there is a charm peculiar to it, a freshness and a variety which is lacking in most of the well-known centres. These ramparts of the Alpine Fortress stand so near and dominate so directly the lowlands and lakelands that the contrast is the more striking.

The weather may be coy and capricious, yet do not the poets tell us this is the charm of the fair sex?

My first thought of this climb was not from books, for I had not read a word about it, but when we were crossing the Jungfrauoch in 1896. (Be it observed, before the railway and station had desecrated the damsel's fair neck.) As you hew and hack your way upwards you get an excellent view of the profile of the Mönch. Somebody has said that modern climbers are reduced to going up mountains the wrong way. But does the first ascent confer a patent right to compel everyone else to go the same way?

I hope you will forgive me if I break one of those unwritten laws or customs which arrange all the matter in historical order; an excellent plan, no doubt, but now and then better observed in the exception. For the personal element is the one force which can recover the vital interest in the dead record. As to the records themselves, 'are they not written in those dear little handbooks of the *Climbers' Guide* series?' We will not forget or ignore our predecessors. Von Fellenberg, with C. Michel and P. Egger, bivouacked high up on the rocks in 1866, failed the first day, crossed the next, but were benighted on the rocks above the Jungfrauoch. They were followed in 1871 by Herr Bischoff with P. Egger and P. Bohren. Then came A. W. Moore in 1872 with Melchior and Jakob Anderegg. This was the sequel to an attempt by Moore and George with Almer in 1862. Two further ascents followed within four days,

viz., Mr. T. Cox on July 25, and Miss Brevoort and Mr. Coolidge on the 27th; while a few days later Mr. J. H. Kitson and Almer, *in the day*, made the ascent from the Wengern-Scheidegg, descended by the S.E. arête to the Ober-Mönchjoch and by the Jungfrauoch to the Scheidegg! Other ascents followed them, including Dr. Dübi in 1877. The ice-cliff, the main difficulty of the climb, then appears to have got worse, for Messrs. Jose and Fairbanks in 1886 only reached the top at 6.10 P.M., and Herr Hügli in 1894 took 13 hours.

The first descent was made by the late F. T. Wethered with Chr. Almer and C. Roth in 1875, 'the snow being in splendid order . . . the number of steps which Almer cut was very great.'

In August 1895 Mr. Claude Macdonald and the late Christian Jossi brought off a brilliant coup. Starting from the Roththal hut, they crossed the Lauithor, ascended the Mönch from the Jungfrauoch by the W. ridge and then descended the N.W. buttress. Not everyman's route!

As our expedition was the next we had better make a start. On August 10, 1897, at 2.30 A.M. we left the Guggi hut (the old one, of course). I had as guides Peter Brawand and Peter Baumann (Guggen), then a veteran, who died only last year. I must own that without Brawand's leadership and excellent ice-craft I do not think I should have had a chance. Let the guideless climbers smile, but few would not be the better for the object-lessons which a really good guide can give. There was bright moonlight and we had no difficulty on the easy rocks, which rise steeply but in regular steps like the pyramids. There was only one drawback, every now and then we came across a slab with *verglas*, which the dark shadow of the moonlight concealed. You all know the sensation, it makes you take extreme care. Near the top of these rocks we suddenly came on a party of engineers prospecting for the coming Jungfrau railway. But the top of the Mönch was not their objective—theirs the *iron*, ours the *icy* way; so we parted, mounting the snow-slope which brings you to the foot of the critical place, the well-known 'Nollen' or 'Bulge,' usually of hard ice. Here we halted for 20 minutes for our second breakfast, for the weather was cold and our task thrust obtrusively before us. Indeed that was the last time we stopped or undid the sacks till 5.30 P.M. when we crossed the Bergschrund on the other side. There was no shirking the 'Bulge.' On either side whether to the Eiger or the Guggi Glacier, the drop was sheer. So also was the ice overhead.

We pushed Peter up to a point where he was able to hack a small but sound step and handhold, the latter quite as important as the former. Some previous climbers had brought a ladder, but it was then standing straight upright out of reach, a full 30 ft. away from the ice cliff and firmly frozen in. I shall never forget the chunks of ice which descended on my devoted head; I longed for an iron coal scuttle instead of my hat. I don't know the exact height of the vertical (or nearly vertical) ice bulge, but I should think 40 ft. I followed, well knowing that the support of the rope was merely moral, and that I must not slip. My experience is that people very seldom do slip in such places. All the same, moral support makes a difference—it keeps your balance, if nothing else—a piece of string is better than nothing. The finger-holds in the ice were pernicious cold, and by the time I reached the top—for you could not use gloves—I had not much feeling in my four digits. Peter Baumann first sent up the sacks and then came up himself, none too pleased with what he called a 'verrückte Kletterei.' Of course he had the pull on both of us, so he was quite secure. But the slope above was still very steep and the ice very hard. Naturally, and very properly, Peter Brawand cut the steps very far apart. If my legs are short they were fairly supple. One good step is worth three toe-caps or scratches. A slip was not to be thought of, so I gathered up the rope and kept close to heel. By this means I was able to fix Peter's foot while hacking and improve the step for myself. This stunt lasted about three hours, but I had no hands for my watch. At last the slope became not too steep for snow to lie on, so we had the luxury of a change, and stamped on in the hope that we should soon be on the ridge. But alas, the slope grew steeper and blue ice was only masked by a film of snow! For a time we cut straight up, but it was plain that daylight would not see us clear of it, so we made a traverse to the right to strike the ridge, usually rock, which runs down to the Jungfrauoch. A traverse on a really hard, steep ice slope is not a form of climbing which the most hardened mountaineer hankers after; for not only must every one stand for himself, but also for his comrades. However, care and time took us across, and at last we plunged into the snow, which filled up all the spaces between the rocks right up to the top. It is very steep and the snow was frozen floury. We floundered along, pulling ourselves up by splinters of rock till the rock ridge petered out into a tolerably firm snow ridge. By this time we were all pretty well out of breath, and I well

remember hearing my heart beat so clearly that it seemed an outside sound. At 2.30 we reached the summit. But alas, not to rest, for a very bitter N.W. wind made even a halt impossible. We had, besides this, as a spur the thought that the descent was mere child's play, a tourist's trip. Mr. Dent tells us somewhere that he once came down almost the whole mountain in a series of glissades. I can only say that the mountain must have mightily changed since then. Soon after we had passed the summit we came upon a huge cornice which 120 ft. of rope could not span, for we were all on it at once. The overhang was not very great, but I have since seen that Mr. Moore and his guides broke through and only escaped disaster by an ace. The day, however, was really cold, and the snow in capital condition. There were, besides, big drops or pitches of 8 to 10 ft., down which we cut steps till the slope began to ease off, and at 5.30 P.M. we crossed the Bergschrund (chock full of snow). Here we called a halt of half an hour, for it was quite warm and we could see our destination, the Concordia, before us. But seeing is not achieving, for four miles or so of soft snow lay between us, every step well up the thigh. The only way to keep going was to count a hundred steps, or rather plunges, stop, take breath and take another hundred, or else persuade the man behind that it was his turn to lead. How ready we were to waive the leadership! Only at 8.30 P.M. did we reach what the old lady called 'terra-cotta' and scramble up the rocks to the hut, only to find that our friends, who were to have met us from over the Roththalsattel, had not arrived. The provisions ordered had been sent up from the Eggishorn, including eleven bottles of wine, of which two were champagne. The Concordia in those days was a beastly hole; but we slept well and soundly, and fondly hoped that the fine night would bring our friends over the next day, but again disappointment was in store for us. For at least six hours I sat gazing out on that expanse of snow, and watched party after party develop from specks into human beings, but not into the well-known faces. Poor old Peter Baumann, who was a born pessimist, sat beside me like Edgar Poe's raven, ever croaking 'Nevermore.' (His son was one of the guides of the other party.) 'Sie sind verunglückt. Sie sind sicher kaput,' was his mournful refrain. All day no news from below. So on the morning after at day-break we made a start for the Mönchjoch, and without a halt crossed the Ewigschneefeld, which was firm, over the Mönchjoch, and passing Bergli, descended the Kalli zig-zags, arrived at the Bear Hotel at 11 A.M., only to find our friends in the lap

of luxury and wondering when we would return ! A few winged words as to what we thought of them for not telegraphing relieved the tension.

We also found that Captain Farrar, led by Daniel Maquignaz, had climbed the buttress on the 14th, and moreover had come down by the same route.¹

THE NORTH FACE OF THE MONTE DISGRAZIA AND OTHER CLIMBS.

By W. N. LING.

[Read before the Alpine Club, March 6, 1923.]

IN the exercise of his new authority the honorary secretary has commanded me to read you a paper to-night. I am driven back to ancient history, the year 1910, the month of August, although an admirable account of this ascent, written by my companion, Harold Raeburn, has already appeared in the JOURNAL.

After some training climbs at Arolla and Zermatt, including an attempt on the Lyskamm, frustrated by bad weather, Raeburn and I journeyed to Sondrio in Val Tellina and up the beautiful Val Malenco to Chiesa, where we spent a delightful day. We proposed to attempt the ascent of the Disgrazia by the N. face, which had not been done. The magnificent appearance of this mountain and the thrilling accounts in the JOURNAL of its first ascent by Mr. Kennedy,

¹ [Times were : Kl. Scheidegg, 2.10 A.M. (splendid moon) ; ridge overlooking Guggi, 5.20 ; last rocks, 6.15-6.45 ; foot of 'Nollen,' 7.50 ; on plateau just under rock ridge, 9.22-9.40 ; summit, 11.6-11.13 (cold) ; back on plateau, 12.15 ; foot of 'Nollen,' 12.55 ; Scheidegg, 3.45 P.M. It will be seen that we took about 1½ hours to ascend the 'Nollen'—the fine soup-plates cut by Mr. Heard's leader were partly melted and required a great deal of cutting out, as no liberties can be taken with ice at that angle, which must be little short of the vertical. We used crampons and cut very few other steps. We had our own steps for the descent, whereas Mr. Wethered's and Mr. Macdonald's parties had, of course, none. At the same time, in my own observation this ice 'Nollen' varies a lot. I saw it, some years later, when it had apparently *run*, as though the ice had become viscous, and the angle was then very much less. It can be an arduous ice climb.—J. P. F.]

of Messrs. Pratt, Barlow and Still's ascent from the Ventina glacier, and the guideless ascent by another route from the Ventina glacier by Messrs. Charles and Laurence Pilkington and Hulton, had greatly excited our interest. Next day we chartered a porter, rejoicing in the name of Alvaredo Casimiro, and followed the charmingly wooded bank of the stream in some three hours to Chiareggio, where we stopped for an hour to lunch at a primitive inn. An hour and a half later, at a height of 5800 ft. in the Val Ventina, we paid off our porter and prepared to *gîte*.

We had endeavoured to explain to him in our broken Italian, that we intended to ascend the N. face of the Disgrazia, to which all he had to say was that it was 'molto brutto' and recommended us to try the Passo di Mello instead. When we saw it we rather agreed with his verdict. It certainly looked appalling. After he left, we went exploring and finally decided on a higher *gîte*. We went back, and about 6.30 we had our dinner and went on to our *gîte* at a height by aneroid of 7200 ft., on the ridge running down from the Pizzo Ventina. There we found a grassy ledge, on which we laid juniper boughs, lit a fire and were quite comfortable. It was not too cold, but a drip of water from above was rather annoying and denied us sleep. The night was fine, and the sky lit by stars. We got up at 11.40 after four hours' rest, and after an early breakfast, or late supper, left our shelter at 1.10.

Our way lay up steep grass slopes and scree, broken rocks and snow. At 2.30 we were on the glacier and put on the rope at a height of 8500 ft. Then we had two hours of hard work through the huge *séracs* and up steep snow, quite difficult, after which we gave ourselves five minutes' halt. Then on again, laborious work, up steep slopes to just below the bergschrund, 10,500 ft. at the foot of the rib of snow or ice we proposed to attack. There we halted for twenty-five minutes for food—6.10 to 6.35. The weather was favourable, and we were pleased with our progress thus far. We now gathered ourselves together, put Mummery spikes in our heels and tackled the schrund. This was passed without much difficulty, but the slope above it was very steep, 62° measured by clinometer. However, though steep, it was hard, good snow, and we were able for some distance to kick our steps, then we had to take to cutting. We made for a small island of rocks, which were very steep, and ascended them. From the top of them a very narrow snow *arête* led out into the general face, where the angle was measured 53°. To our left was a large massif of

rocks, which, however, on inspection proved quite impossible, and sheathed in ice with no hitches, and we had no alternative but to take to the face again and cut. The steps could not be described as roomy, nor very near together, for we had a long way to go, and it passed through the mind of, at any rate one of us, that if we had to return the same way they would need a good deal of improving. The snow was very thin and we had to be very careful. It was no place to slip. Our choice of route was restricted, for we had to avoid the parts which were overhung with cornices.

We tried here and we tried there looking for patches of snow, but there was no easier route; so we just had to cut and cut in hard ice, slowly progressing upwards till we came to a jutting-out rock, where we managed to clear out a hitch. The rocks immediately above us were impossible, and it was necessary to traverse the slope diagonally upwards to see whether they were better at their other corner. My own impression was that we would have to go down again. However, Raeburn started off across the face, and I kept to the hitch till all the rope was out, and then followed. Raeburn cut on, and at last came to where there was enough snow to hold him. I followed, with hopes rising, and we came to the foot of the rocks. A ledge took us along to the foot of a small chimney. We tried this and it was hard, so we did not persevere, but, further along, the ledge looked a little better, and we finally climbed the rocks to the ridge, or first top, with much rejoicing. It was 3 o'clock, 14 hours from our bivouac, and 8½ hours since our last meal, so we were glad to sit down and refresh the inner man. Then we went along the ridge without special difficulty to the summit, 3.35. We had thus far been very fortunate with the weather, but it now changed and the valleys were full of mist. We retraced our steps along the ridge, collected our baggage, and descended by the S.W. face and Predarossa glacier, easy going, though the snow was soft on the glacier and lower down we came into mist. At 5.50 we reached the Capanna Cecilia and made a welcome brew of tea. We lay down on the bunks to rest, intending to have dinner later, but did not wake up till breakfast time, to find heavy showers and misty weather. We left the hut at 9.0 and made up to the Col Remoluzza and over into the Val Pioda, then over a spur into the Val Torrone. It was now very misty, and we wandered about for some time till we came across a boy, who could, however, give us no useful information; so we decided to return to the *baita*, or shelter, we had

passed and to spend the night there. It was now raining in torrents and we got pretty wet. Our provisions were low and we made a frugal meal of soup.

We had some meat, but it had formed an unfortunate combination with the contents of our methylated-spirit flask. At that time whisky was still obtainable, and we were neither of us educated to the taste of methylated spirit, so we had to throw it out. Our firewood was damp, and each of us took it in turn to blow to keep it alight, while the other got some rest. At 4 o'clock next morning the weather was rather better, but food was very short, and we debated whether to take the prudent course and go down the valley and round by train, or chance it and make a push for the pass. The latter course prevailed, and having divided and gnawed our last hard roll we set out at 5.30.

Two hours' steady pull brought us to the Allievi hut, and here we fried our last egg. In an hour and a quarter we were at the Zocca Col, and were much impressed with the rock peaks. The weather was now fine, and we made good progress down the easy Albigna glacier to the then unfinished Albigna hut, by which we halted for an hour and made tea, and on to the road and Vicosoprano, where an enormous omelette satisfied our inner cravings. We took the diligence up to the Maloja. After a day's rest here we went to the Boval hut. Next day we were driven back by bad weather, but two days later we left the Boval hut at 2.0 A.M. to try the Crast 'Agüzza with descent to the Capanna Marinelli. It was a beautiful morning and the snow was good and hard. In four hours, including twenty minutes for breakfast, we were on the Col between the Crast 'Agüzza and the Piz Argient. We ascended on good snow to the rocks, which at first were easy; then they got very slabby and iced, and we had to make one or two traverses; the general angle was steep. In one place Raeburn had to leave his axe and clear the holds of ice with his knife. The ridge itself was very narrow and corniced and we had to be careful. We reached the summit at 8.15, but it was too narrow and exposed to stay, so we climbed down the ridge for a quarter of an hour and stopped for breakfast. Then we climbed down the corniced ridge, taking to the gully occasionally when there was snow.

From the ridge we got down to the Scerscen glacier by a gully of soft snow. The snow on the glacier was fairly good, but there were some crevasses. We did not hurry, and reached the Marinelli hut about 2.0. There we met Dr. Balabio, the

authority on the Disgrazia Massif, and spent a very pleasant afternoon. He was very interested in our ascent.

Our plan for the next day was to ascend the Monte di Scerscen and carry on along the ridge to the Bernina. We left the hut at 2.20 and in good snow made excellent progress to the foot of the Fuorcla Tschierva-Scerscen, up steep slopes and across the bergschrund to the rocks at 5.30. These were steep, but easy and good, and we made height rapidly. Then they became much steeper and covered with ice and snow. We came to a very steep chimney, which was the key to an overhanging step, but it was full of ice and quite impassable. We had to turn the difficulty by an awkward and dangerous traverse across a steep wall of ice. Above this steep rocks led to the edge again, and by this we ascended to the main ridge close to the S.W. peak. There we followed a narrow snow arête to the highest summit—10 o'clock. It was now misty, but we could see the extremely narrow and corniced arête, which led on over the towers, which crown the ridge.

Below the ridge on either side the snow lay thinly on ice. Now followed a very exciting and difficult piece of work. The greatest care and much time had to be expended in working along the cornices piled up on the narrow ridge; sometimes they had to be broken down, then we would be astride, now balancing along the top, now gingerly kicking steps while we pressed delicately on the top for handhold. It was exhausting work and the tension was great. We compared it unfavourably with the Viereselsgrat, of the Dent Blanche, which we had climbed in similar conditions. One or two of the towers we cut on the N. side, one we took on the S. whenever the state of the snow would allow. Eventually at 3.25 we reached the last dip but one, the main one at the head of the big couloir, from which the ridge springs to the Bernina. There we halted for ten minutes. The weather had become worse, and we were soon in the middle of a thunderstorm with hail and snow, and it became very cold. We soon saw that we must give up the Bernina and get down.

We tried in the direction of the Tschierva glacier, but we could see nothing. The snow soon became very thin and dangerous, and after going down 250 or 300 ft. we had to return to the Col. On the S. side we were sheltered from the wind, and after some hard work we got down to snow in the couloir. We descended for some distance till we came to a steep icy pitch, and here we had to take to some very badly iced and difficult rocks, which Raeburn managed with great skill. By means of these we were able to turn the pitch and regain the

couloir. From this point a groove, cut by snow avalanches, ran down the centre of the couloir, and, as it was now evening and safe, we tried this and found the bed of it better than the snow at the side, which was hard. We descended this by ropes' lengths, hitched, kicking steps for 2000 ft. It required care, for we came on ice from time to time. We arrived safely at the foot at 9.0, and found the schrund filled with avalanche snow. We were glad to be out, and now lit the lantern. The slopes below went all right and we trudged across the glacier to the Marinelli hut—10.20—twenty hours' hard work, but we were lucky not to be benighted.

We had now to get back to Pontresina, and after our long day we were not very early starters. It was 8 o'clock when we left the hut, intending merely to cross the Crast 'Agüzzasattel. It was hot and we did not hurry, and reached the Col at 12.30. There we rested for an hour and made tea. It had occurred to us both that, when we were so near, it was a pity not to go up the Bernina, so on we went, and at 4 o'clock stood on the summit. We stayed for half an hour to admire the magnificent view and a fine fogbow, then descended to the Boval hut and on to Morteratsch—8.40.

After our three days' hard work we felt we deserved the excellent dinner we got, and the luxury of a carriage to Pontresina.

CANADIAN CLIMBING NOTES.

By VAL. A. FYNN.

Mt. Lefroy,¹ 11,220 ft.

THE usual route² in ascending this mountain leads from Abbot Pass up the snow or ice slopes of the western face directly to the summit. These slopes are broken in places by very steep rocks. Sometimes, late in the season, it is preferable to traverse the face diagonally to the left or N. and reach the main ridge a little to the N. of the main peak. Another route, first taken by Rudolf Aemmer, some ten years ago, starts from the Victoria glacier and in the main follows the N. ridge of the mountain. This ridge forms the sky-line

¹ See Interprov. Boundary Comm. Atlas Sheet 15 (in Club Library).

² See upper illustration, *A.J.* xxxii., opp. 74.

as seen from the Château Hotel. The lower end breaks off sharply, falling to the Victoria glacier in a series of impossible-looking pitches. The approach to the upper slopes of the mountain from the Victoria glacier, as well as from the wide gorge which leads to Abbot Pass, is guarded by a practically perpendicular wall broken by a single deep-cut couloir. It is impossible to follow the bottom of this couloir all the way, since the upper quarter is devoid of snow or ice and overhanging. I understand that the first and only party took to the rocks on the left or E. side, thus gaining the snow or ice slopes above the perpendicular wall. These slopes are interrupted by steep, and mostly rotten, rock walls and ribs. When there is little snow the climber must struggle with scree and ice slopes which lead to the N. arête at a point where the latter becomes climbable.

On July 31, 1920, W. C. Escher, S.A.C., of Zurich, and I left the Château at 3.5, reached Victoria glacier at 4.30 and the foot of the couloir at 5.10. This couloir is well shown on the photograph taken from the S. slopes of Mt. Whyte. To the right are some broken snow-covered rocks giving easy access to the middle of the couloir. At that point the wall on the right becomes extremely steep, but a little higher it is broken by a steep chimney, reached by utilising the snow in the main couloir. The chimney affords plenty of holds, although all are worn smooth. Near the top a tunnel leads off to the right, and one emerges on the snow slopes above the perpendicular wall through a large hole. Large quantities of water coming down the chimney made this part of the climb trying. There is no difficulty in reaching the ridge from any point above the wall referred to, particularly when there is plenty of snow on the slopes. The snow slopes were reached at 7.5, and after twenty-five minutes' rest we set foot on the N. ridge at 10.30, and reached the S. peak, after twenty-five minutes' halt, at 2.25 p.m. The weather was very warm but clear, and there was much ice on the ridge, requiring over two hours of step-cutting. Leaving the summit at 3 p.m., we retraced our steps along the nearly horizontal part of the ridge, and crossing the W. face diagonally made Abbot Pass at 7.20, and the hotel at 9.25.

Mt. Quadra,³ 10,400 ft.

The same party left the chalet at Moraine Lake at 2.45 a.m. on August 5, took the trail into Consolation Valley and con-

³ See note 1.

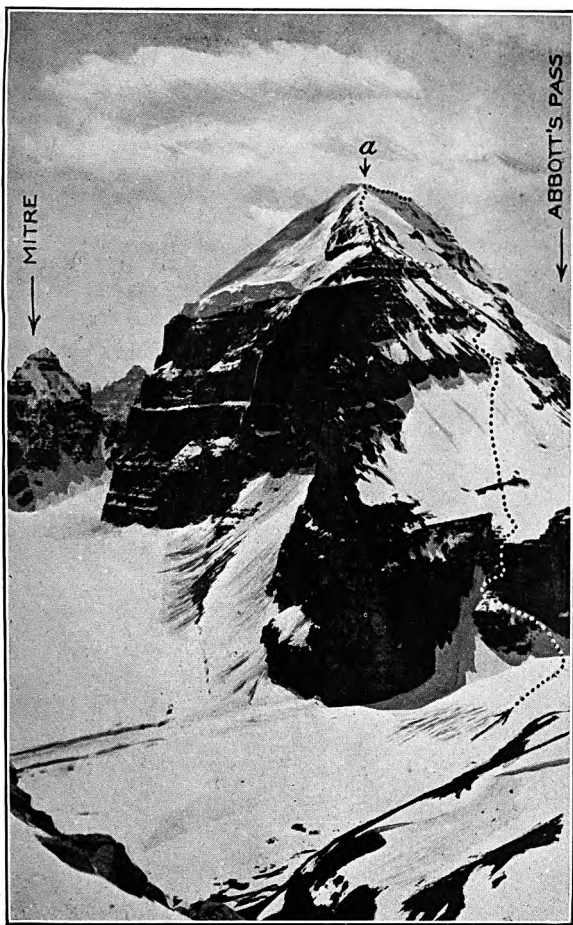


Photo. V. A. Fynn.

MT. LEFROY.
From S. slopes of Mt. Whyte.

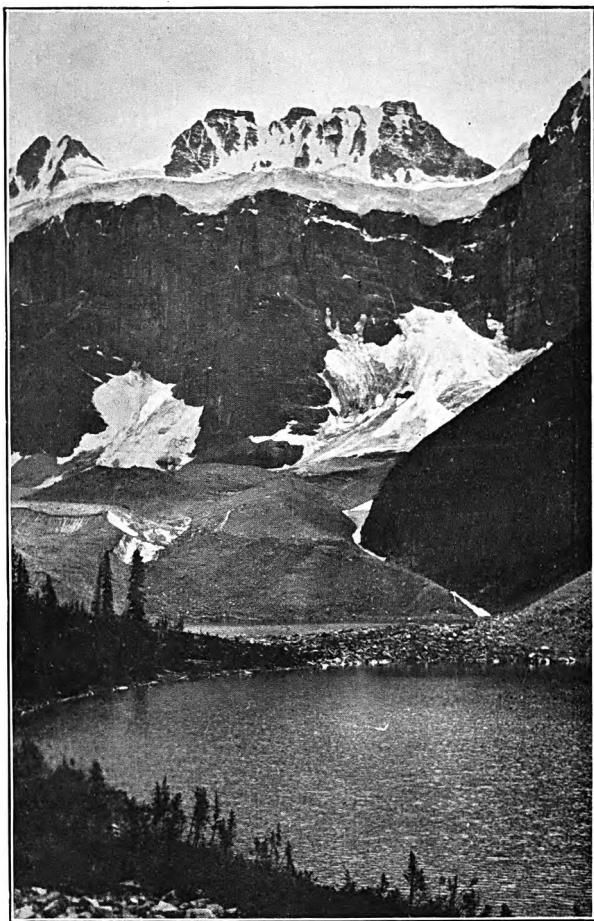


Photo V. A. Fynn.

MT. BIDENT (left) AND MT. QUADRA (right).

tinued past the lake up to Consolation Pass, 8800 ft., which was reached at 6.45. Descending as little as possible, a buttress of Mt. Bident reaching S. in the direction of Boom Lake was circumvented and the glacier at the back of Mt. Quadra reached at 7.50. Giving thirty minutes to breakfast, the glacier was crossed to a Col on the S. ridge of Quadra. The W. side of this Col is one mass of fairly large and distressingly loose stones at a steep angle. Leaving the Col at 11, the summit was reached at 2.10 (second ascent) after an interesting scramble over the very rotten ridge. The weather was perfect, and a splendid view was enjoyed. Leaving at 2.45, the Col was reached at 5, the breakfast place at 5.55, and after thirty minutes' rest we made Consolation Pass at 7.10 and were back at Moraine Lake at 9.30. The amount of walking necessary to ascend Quadra, Bident, or Chimney Peak from Moraine Lake is out of all proportion to the length or quality of climbing to be had. The same is true of some of the Ten Peaks.⁴ Any of the first six of the Ten Peaks can be reached from Moraine Lake, either via Consolation Pass or by means of a steep and often treacherous couloir between No. 3 and No. 4. This last approach is also very long, since fully five hours are needed to reach the top of the couloir in question, and falling stones may preclude a return by this route. A hut is badly needed somewhere back of this ridge, and the most central location appears to be W. of the ridge joining Mt. Quadra and Chimney Peak. Nos. 7 and 8 can only be reached from Prospector Valley, while Neptuak and No. 10 are accessible from Wenkehenna Pass, 8521 ft., about three hours' walk from Moraine.

*Mt. Freshfield,*⁵ 10,945 ft.

On August 21, A. L. Mumm, C. B. Eddy, Moritz Inderbinnen, Rudolf Aemmer and I left a camp at the foot of Freshfield glacier at 3.25, followed the glacier for about seven miles to the foot of the peak, crossed to the S. of the eastern ridge by way of a low ice-covered saddle, and thus reached the upper snow and ice slopes facing Mt. Pilkington. These slopes were ascended to the foot of the final peak, and the latter reached over easy rocks at 1.50. Leaving at 2.40, the party retraced its steps and was back in camp at 7 P.M. The weather was perfect, and the view from the summit most interesting and very remarkable because of its extent. The Freshfield glacier

⁴ See note 1.

⁵ See Interprov. Boundary Comm. Atlas Sheet 18, published with this JOURNAL. See illustrations, *A.J.* xxxiv. 388-9.

divides at the foot of the peak, the branch running S. in the direction of the Mummery peaks being about eight miles long; the N. branch which goes past the foot of Mt. Dent seems to be about six miles long. Mt. Pilkington is a very fine and rather difficult looking peak. The same is true of Mts. Mummery and Walker, although little of these can be seen because of Mt. Pilkington. The view into Bush Creek and out towards the Columbia is most fascinating. The Columbia icefield and the peaks surrounding it could not be seen very clearly because of smoke, but Mt. Forbes was very prominent and imposing.

FIRST MT. CLEMENCEAU EXPEDITION, JULY-AUGUST, 1922.

BY HENRY B. DE VILLIERS-SCHWAB.

FAR out on the Canadian National Railway, about thirty miles E. of the Continental Divide at the Yellowhead Pass, lies the little town of Jasper, now the administrative centre of Jasper National Park. Some sixty miles S., along the Athabasca River and its big tributary, the Chaba, lies magnificent Fortress Lake, its eastern extremity but a few hundred yards from the Chaba, and just across the line in British Columbia. Six and a-half miles away, its western end drains into turbulent Wood River, which, after flowing past the base of Mt. Serenity (10,573 ft.), first climbed by Messrs. Palmer, A.C., and Carpe, Am.A.C., in 1920, is joined by Clemenceau Creek and then flows away through a canyon into still wilder territory, eventually to join the Columbia River.

In this angle between Clemenceau Creek and Wood River, and seeming to block the end of the valley, stands Bras Croche (10,871 ft.), while farther back, towering above Clemenceau glacier, stands the majestic form of Mt. Clemenceau (12,001 ft.), bearing a striking resemblance to the well-known view of the Jungfrau from Interlaken.

This splendid peak is the fourth highest summit in all the Canadian Rockies, and is to-day its second highest unclimbed mountain.¹ To the few explorers who have seen it from a distance, among them Professor A. P. Coleman, A.C., and Mr. Walter D. Wilcox, Am.A.C., and to the few trappers and grizzly bear hunters who have penetrated to this Wood River

¹ The North Twin (12,085 ft.) is the highest.

region, the peak has been variously known as Misty Mountain or the Pyramid ; but not until 1920 did the Canadian Survey Party establish stations in the district, determine its height and importance, and officially bestow upon it the name of Mt. Clemenceau.

Allen Carpe, having been greatly impressed by the sight of Mt. Clemenceau from Mt. Serenity in 1920, proposed the subject of an expedition to this district to the writer in January 1922, and eventually Henry S. Hall, jun., Am.A.C., became the third member of the climbing party. The leisure hours of the ensuing six months were none too many for the proper planning of the expedition, and the preparation of a number of special articles of equipment, such as extra-light sleeping-bags and tents, suitable for back-packing.

Thus, on July 27, 1922, the three climbers, together with the packer-guides, W. D. Harris and H. J. Mellor, with young Dean Swift as assistant-packer, and employing six riding and seven pack horses, set forth from Jasper completely equipped for a four weeks' campaign.

The first day's march was twenty-two miles to Athabasca Falls ; the next of twenty miles farther along this river ended at the confluence of the Sun Wapta ; while the third, which should have taken us about eighteen miles to the eastern end of Fortress Lake, ended just below the ford of the Athabasca, owing to the writer being kicked in the knee by one of the pack horses. On the fourth day the Athabasca was forded, and in turn the Chaba, when, after crossing the Continental Divide out of the Park into British Columbia, the march continued through the trailless woods on the north side of Fortress Lake until darkness forced a bivouac, after barely three miles net distance had been gained. From 7.30 A.M. until 4.30 P.M. the next day we laboured, negotiating the remaining four miles to the W. end of Fortress Lake, an advance party of two chopping out a way through great fallen trees, patches of devil's club, and thickets of obstinate alders, while the rest drove the tired pack animals with the greatest difficulty.

On Tuesday, August 1, the sixth day, Alnus Creek, which joins Wood River a mile or two below the lake end, was forded and the march continued down the valley on its N.-W. side, Serenity Creek being reached at 4.20 P.M. Knowing that the Survey party of 1920 had forded Wood River near here, this spot opposite Ghost Ridge—the long ridge between Clemenceau Creek and Ghost Creek, culminating in The Ghost (10,512 ft.)—was selected as our base camp. But, alas ! no fordable place

could be found either above Serenity Creek or in the remaining miles before the river enters the canyon ; evidently owing to the hot smoky weather the depth of the river was much greater than had been the case in 1920. Consequently, there was but one thing to do : retrace our way next day and establish base camp on the flats by Alnus Creek, where we were able to cross the two rivers before their junction. However, owing to cut-banks and cliffs on the S.-E. side of the river, horses could not be used there. This meant that back-packing would commence from this point, and accordingly the balance of the day was spent in weighing out provisions for the climbing party and preparing the back-packs.

At 9 A.M. on Thursday, August 3, the party having forded the two rivers on horseback, bade good-bye to Mellor, who remained to tend the base camp and horses, and toilfully made its way through the woods, thick with entangling undergrowth, to the flats near where Ghost Creek runs into Wood River, which was reached about 1 P.M. After lunch a return journey to Wood River ford was made in two hours, and the second relay of packs brought forward to Wood River camp. These packs averaged only thirty-five pounds, but this was the heaviest that could be carried owing to the difficult nature of the ground. Bulldog flies and mosquitos abounded hereabouts and annoyed us greatly, while several times hornets' nests suddenly trodden upon caused unwelcome excitement.

Next day the party crossed Ghost Creek on a felled tree, made its way through the heavy woods and up Ghost Ridge, passing timber line at about 6000 ft. and continuing up boulder, debris, and rough grass slopes to the bare promontory on which is the Survey Cairn of Wood River S., height 7300 ft., which was reached about 3.30 P.M. Having cached our packs here, we returned to camp in about two hours.

The writer's knee, which, although lame, had stood up manfully since the accident on the 29th, gave out completely under the heavy strain of back-packing. Consequently, August 5 had to be devoted to summoning the aid of Mellor and some horses, and getting the writer across Wood River by a series of tree-bridges, and so back to the base camp. There he remained unable to walk at all for several days, in care of Mellor and Swift, later being taken down Fortress Lake in the large canoe of the Hinman-Philips camping party, which touched at the E. end of the lake. From there he rode back to Jasper in three days with Swift and one pack-horse, being in the company of this party as far as Athabasca Falls.

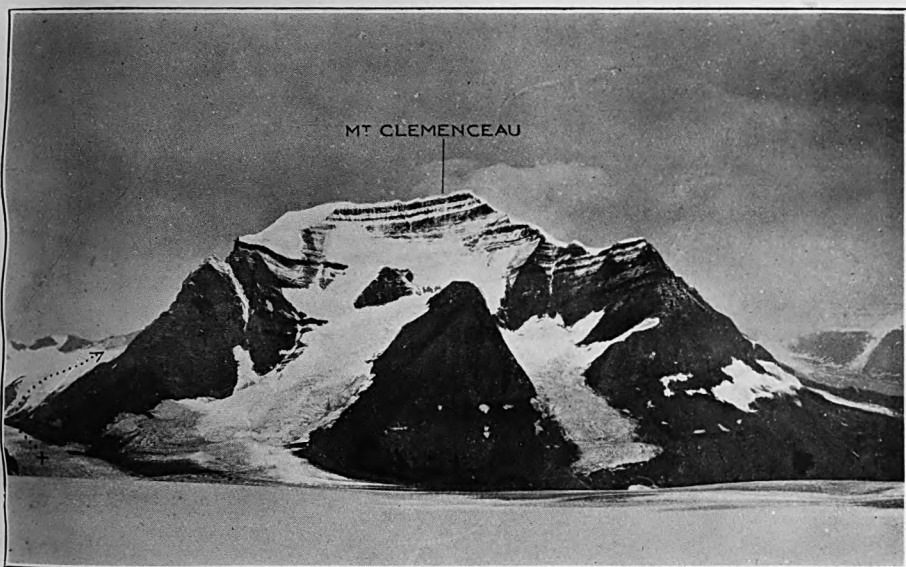


Photo H. S. Hall, Junr.

FROM CLEMENCEAU GLACIER.

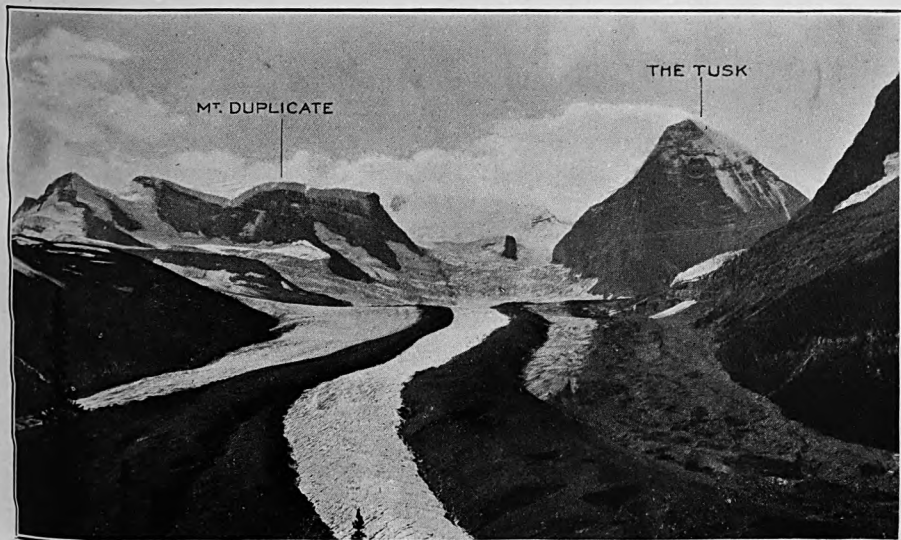


Photo H. S. Hall, Junr.

CLEMENCEAU GLACIER.
From above Camp.

On Sunday, August 6,² Carpe, Hall, and Harris, setting out from Wood River Camp, carried the second relay of packs up the ridge, and then along the rough debris slopes above Clemenceau Creek to a point opposite Cliff glacier, where they bivouacked at 7 p.m. at a height of about 6600 ft. (Bivouac 2). After a bad night, owing to their uncomfortable position and the falling of light showers, they went on some distance, but coming to an impassable cliff were forced to retrace their steps nearly a mile before a descent could be made almost to tree line and so around the obstacle. Thoroughly tired, Camp 3 was made about 2.30 p.m. at the edge of a large rock slide just below tree line at a height of about 6250 ft. There being no water here, snow for cooking had to be procured from some distance.

Leaving at 7.40 a.m. on the 8th, the party returned to the 7300 ft. cairn on Ghost ridge in three hours; then, after a rest for lunch, they returned to camp with all the provisions and equipment necessary for the reduced party, taken from the five packs left here on the 4th.

Next morning a two hours' march brought the party on to Clemenceau glacier, about a mile above its snout, and a quarter of a mile farther on they discovered the site of the 1920 Survey Party's camp. Here, in the pine woods, about a hundred yards from the ice and close to a pretty stream, Climbing Camp was established. During intermittent rain a return was made to Camp 3, and the second relay of packs brought in.

On August 11 Carpe and Hall walked some five miles up Clemenceau glacier in a southerly direction to a height of about 8300 ft., first following a large medial moraine for about two miles, then crossing a debris 'island,' and on to the middle snowfield. When near the foot of Mt. Duplicate (10,100 ft.) a snowstorm came on and drove them back to camp. Heavy rain confined the party to camp next day, and that night it snowed down to the 7500 ft. level.

August 13 was clear, although clouds still hung low on the peaks. Starting at 8.15 a.m., Carpe and Hall walked up Clemenceau glacier beyond the middle snowfield until opposite the Tusk (11,000 ft.) they rounded the base of Mt. Clemenceau, where they halted for lunch. Later they crossed the upper snowfield in a westerly direction to the low ridge forming the

² The rest of the narrative is based on the diary of Henry S. Hall, jun.

local divide between what might be called the Clemenceau Creek drainage area and the great basin to the W. In this connection it might be pointed out that Mt. Clemenceau is entirely surrounded by glacier except for less than a mile on its N. base; nowhere does the mountain rise less than 4000 ft. from its encircling icefields, and on the N. the height is fully 7000 ft.

The ridge reached by Carpe and Hall is about two miles from the base of Mt. Clemenceau, and should afford a full view of the side on which we had proposed to attempt the ascent. Unfortunately, heavy clouds hid all but the lower portion of this face, yet enough was seen to confirm the opinion that the most promising route would be up these crevassed névé slopes to the main S.W. ridge, and along that to the summit. A good view westward toward the Northern Selkirks was obtained. Camp was again reached by 7 P.M., both climbers pretty tired.

The day after this reconnaissance was one of rest, and the ensuing was one of enforced idleness because of rain. Realising that with a weakened party, and under existing unfavourable conditions of weather and snow there was no chance of a successful ascent of Mt. Clemenceau, a minor peak was made the final objective.

On Wednesday, the 16th, in somewhat cloudy weather, Carpe and Hall left Climbing Camp at 5.40 A.M., proceeded S. up Clemenceau glacier, and over the middle snowfield until near Mt. Duplicate, when they swung first eastward, then north-eastward, toward an unnamed peak rising from the névé. This was ascended over rocks and snow patches without difficulty, the summit altitude of which is about 10,625 ft. being gained at 12.45 P.M. The name Apex Peak has since been accepted for this peak. From it distant views were had of Mt. Alberta (11,874 ft.) far across the Chaba Valley, The Twins (12,085 ft. and 11,675 ft.), Mt. Columbia (12,294 ft.) about twenty miles to the E. over the Columbia icefields, and Mt. Tsar (11,232 ft.) ten miles to the S.W. The near views of the Tusk and Mt. Clemenceau were, of course, very fine. Leaving Mt. Apex at 2 P.M. in dense mist the party arrived back at camp at 6.50 P.M.

In lovely weather the climbing party broke camp shortly after 8 A.M. next day and marched back past Ghost Ridge Cairn to the little plateau about five hundred feet below, where Ridge Camp was established at 5.30 P.M. Next morning the descent was made to Wood River, and so Alnus Creek Base

Camp was reached by 4 P.M., where all was found to be well with Mellor and the horses.

On the 19th, by a long day's work, the pack-train was driven all the way to the E. end of Fortress Lake. Thence successive marches to the Sun Wapta and Athabasca Falls brought the entire party back to Jasper in the afternoon of the 22nd.

As these lines are being written—in February—tentative plans are under discussion for another and stronger expedition during the coming summer, in which it is hoped that the knowledge gained in 1922 will prove the deciding factor for success.

THE NEW ZEALAND ALPS : HOW TO GET THERE
AND WHAT TO DO.

By ARTHUR P. HARPER.

[Partly read before the Alpine Club, May 1, 1923.]

SO much has been written about the Southern Alps during the last forty years, both in books and in the JOURNAL, that I feel rather diffident about reiterating much that must be already known to members. In addition to this, I have shown slides here on three previous occasions, and a great many of the pictures must be familiar, at any rate to the older members.

However, one or two of my contemporaries have gently reminded me that the years are passing (a fact some of us are apt to forget) and that many have joined the Club since the views were last shown, and these will naturally be interested in seeing them for the first time—they have also very kindly said that the pictures will bear repetition. This is all very comforting, but it still leaves me wondering how to find anything new to say.

During my two months in England, so many have asked me for advice, with a view to a possible visit to our distant country, that I have decided to give some practical information which will be useful to anyone contemplating an expedition, and at the same time show slides which will cover as much country as possible.

I may say at once that I am not going to detail any difficult climbs, for the simple reason that personally I have no record for big peaks in New Zealand. When I returned there after leaving Oxford in '88, I found Mannering and the late

Marmaduke Dixon just beginning, in the most daring way, to attack Mt. Cook as their first objective—a very ambitious task for men who had very little experience in work above the snow line. As I had put in two seasons in Switzerland they welcomed me as a useful addition to their party, and in '89 I joined Mannering in an expedition to the Tasman glacier, with Mt. Cook as our goal. My first sight of these peaks decided me that the biggest could very well be left for a year or two, and more attention be paid to the numerous unexplored valleys, glaciers, and passes. Accordingly I devoted my time to that phase of the work, and left Mannering and others to continue their campaign against Mt. Cook and the other great peaks in this district.

Results were slow in coming, as was only to be expected in a new and difficult country attacked by men who had no expert guides but had to learn the 'craft' as they went along. But results did come, and the record of peak climbing in the circumstances was very creditable between '90 and the end of '94, as may be seen in Mannering's and Malcolm Ross's books, while the more humdrum exploration of the valleys, glaciers, and passes, especially on the W. coast, was fairly complete (see my book, 'Pioneer Work').

So far as the central portion of the Alps was concerned, the season of 1894–95 saw the end of the major exploration; but there remained many first ascents and first passes to be made, which have been gradually reduced during the last eighteen years. Other districts have been exploited to some extent, but much remains to be done in these, as will be seen later.

I have selected a series of slides, made from photographs taken by myself and others, which will give you a very good idea of the topography of the country, its grandeur and difficulties; while those who wish to know more about the scientific features will find some useful information in Mannering's and Ross's books, the N.Z. Government Survey Reports between '89 and '95, by Brodrick, the late C. E. Douglas, and myself, in Dr. Bell's 'The Wilds of Maoriland,' and in my own book, 'Pioneer Work,' which practically collects into one volume the most interesting parts of the earlier publications.

I will now shortly outline a few practical hints for the use of those who contemplate a journey to these out-of-the-way parts.

Routes.—It is a curious fact that the length of time occupied in travelling from London to New Zealand is no shorter than it was 40 years ago; it still takes about 4 to 5 weeks by the

quickest routes and from 5 to 7 weeks via Suez and Australia, Panama, or the Horn.

The routes have each their special attractions. For a climber who can spare the time, it would be useful to include Canada in the itinerary either one way or other, so as to put in some work in the Rockies. But, where time is essential, the Panama Canal is not only the best and cheapest, but is most interesting and comfortable. It saves the trouble of transshipment and wayside delays of the Suez route, and the excessive cost of any of the overland routes via America.

The Best Season.—My personal experience makes me strongly advise members to try to arrange their plans so as to begin their climbing after the New Zealand midsummer—that is, towards the middle of January at the earliest. Earlier in the season the weather is very unsettled, and much waste of time is bound to be incurred. Indeed, the best months are really February, March, and April, during which one may be fairly sure of settled weather and good snow conditions.

Outfit.—This entirely depends on the district in which you intend to work. If the Hermitage is made the headquarters, practically no camping equipment is necessary. There are now several huts so placed that every peak in the central portion of the Alps can be ascended from a hut base.

Mumm, who has just returned from New Zealand after spending a few weeks at the Hermitage, will no doubt be able to give advice from the visitor's point of view.

Should, however, an expedition be contemplated in the less visited districts (see below), a full camping equipment must be carried. Bring with you such things as self-cookers, light tent and fly and sleeping-bags, and possibly concentrated foods, otherwise all supplies can be arranged locally. Bear in mind that in such out-of-the-way districts everything must be carried on your back. Chapter XIII. of Mr. Turner's 'Conquest of the N.Z. Alps' gives very useful hints.

Transport.—Railways and motors have so revolutionised travel that the journey to the Hermitage is quick and comfortable, and even in the less-frequented localities on the E. side motor transport will get you and your equipment to a suitable base camp. In the old days our main efforts were often expended in establishing a base. That is now a thing of the past on the E. side of the Alps. On the W. side access is far easier, but there are still districts on the W. and further S. where conditions are practically the same as thirty years ago.

Where to Climb.—I recently secured from our Surveyor-General a complete set of maps on 'inch-to-the-mile' scale. These are in the Club library. On them I have written comments which will be worth referring to. In addition to this you will find in 'A.J.,' xxxiv. 295, further useful information which will help anyone to decide where to go.

As a general indication, let me say that if the object is to climb first-class peaks only, regardless of first ascents or exploration, the best and only centre is the Hermitage. Miss du Faur's book, 'Conquest of the Southern Alps,' is perhaps the best actual climbing book that has appeared in recent years, and gives an excellent idea of the conditions at present obtaining. Mannering, Malcolm Ross, and I tell of much more primitive conditions in our books, and these are out of date for the Hermitage.

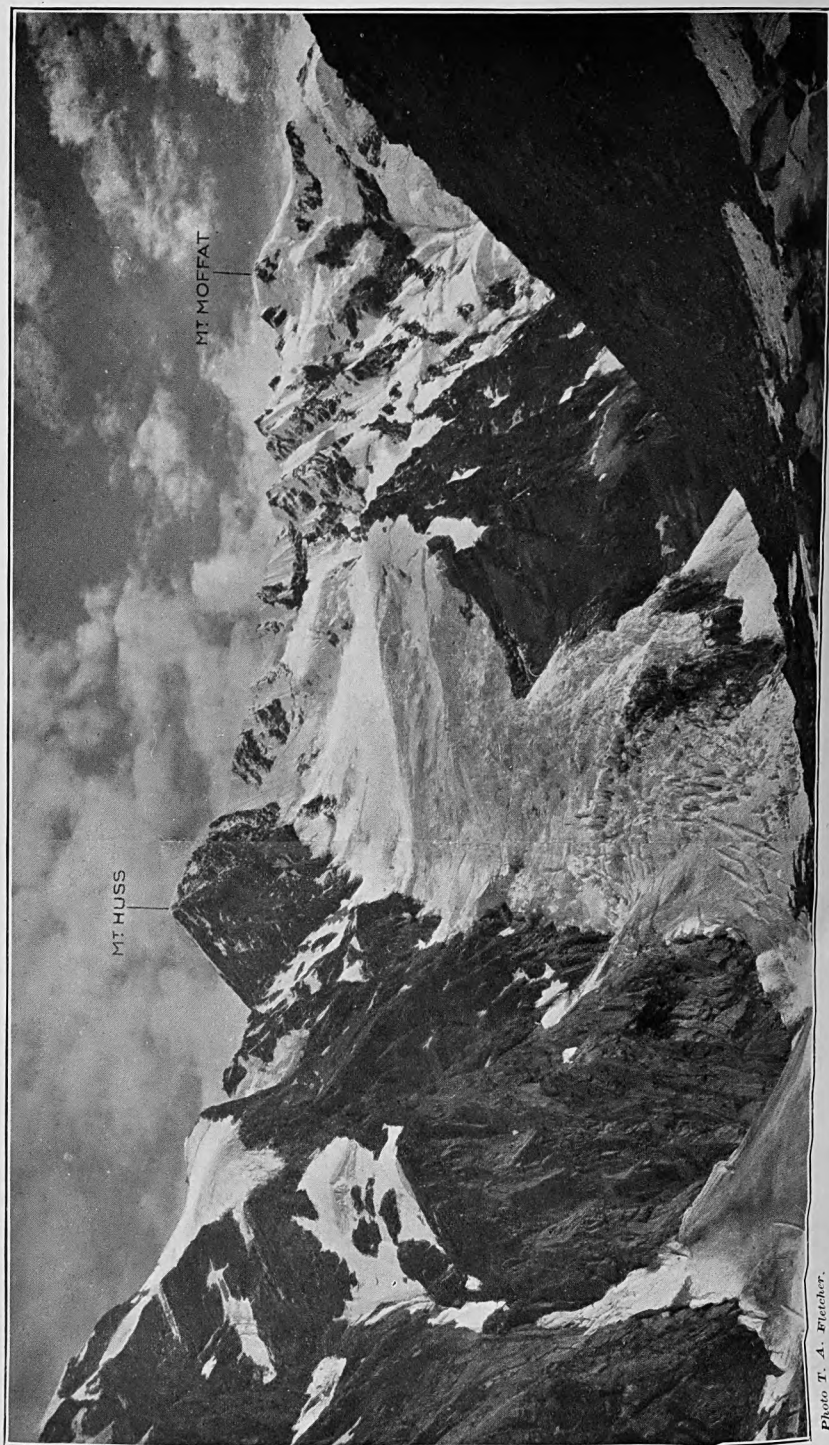
If you want exploratory work in new country and good first ascents, the Headwaters of Rakaia River and its corresponding W. coast regions, the ranges bounding the Landsborough River will give you good work off the beaten track. Perhaps the best of all of the less known districts is that between the Haast Pass and Mt. Aspiring (see 'N.Z.A.J.,' iii. 86). There is a lot of good work to be done here. Finally, the district round Mt. Tutoko behind Milford Sound has some fine climbing (see Malcolm Ross's book and the more recent one by Mr. Samuel Turner, 'The Conquest of the N.Z. Alps.' South of Tutoko is much rugged and unexplored country, mostly below the snow line.

Reference to Chapter VIII. of my 'Pioneer Work' and to the 'N.Z.A.J.,' ii. 20, will give a good general idea of the best way to deal with the conditions obtaining on the W. coast.

Guides.—These can generally be got in New Zealand—thoroughly competent men. But my advice to those who contemplate exploration is to do their own guiding and only engage the services of a good practical man familiar with the general conditions.

Deer-stalking.—In some districts, such as the Headwaters of the Rakaia River and the whole Landsborough Valley, first-class deer-stalking is obtainable, and a party might quite usefully combine this with actual peak-climbing.

General Information.—I am sorry to have to say that we cannot recommend anyone to go to the Government Tourist Department. It may be useful in some ways, but is not at this date competent to advise travellers, especially on climbing expeditions. No one on its staff seems to know 'what's what,'



MT. HUSS

MT. MOFFAT

Photo T. A. Fletcher.

PANORAMA OF THE CLASSEN VALLEY.

nor do they appear to have copies of the most up-to-date maps for reference.

I therefore urge members who are coming out to communicate with me or the Secretary of the N.Z.A.C. We shall be only too glad to advise, and we might be able to help to make up a party if so desired.

This is not an offer made for mere courtesy, but is intended to be acted upon.

IN THE GODLEY VALLEY, NEW ZEALAND.¹

By T. A. FLETCHER, Hon. Sec., N.Z.A.C.

WHAT is commonly known as the Godley District lies at the head of the river that feeds Lake Tekapo. It embraces two large main glaciers, the Classen and the Godley. The former, six miles in length, is separated from the Murchison in the Mount Cook District by the Liebig Range, and flows in a horse-shoe bend, its terminal face just meeting that of the Godley. The Godley Glacier is about nine miles in length, and flows roughly S.W. and then S. Its main tributaries are the Grey, the Maud, the Neish Plateau, and the Dennistoun Glaciers.

At the head of the Classen is Mount Mannering, named after an old and enthusiastic pioneer in the Southern Alps, and this peak has been climbed by H. O. Frind and Conrad Kain. Then, taking the peaks on the Divide in their order, we come to the dome-shaped Huss, and then to the two highest peaks on the Divide in the district, the snow-capped Moffatt and the twin peaks of Livingstone. The Classen here turns, for a spur comes off between the last two peaks, separating it from the Godley.

The Valley of the Classen is a very beautiful one. In its upper reaches it is not more than half a mile wide, and great precipices rise almost sheer on either side. Over these cliffs magnificent avalanches are continually falling, filling the valley with their rumblings. There are few tributary glaciers of any great size, most of them being steep and broken. The peaks

¹ Reference must be made to Mr. G. E. Mannering's paper, *A.J.* xxiv. 67 *seq.*, with many illustrations and a map. The relative position of the Godley glacier is indicated on the map in *A.J.* xxix.

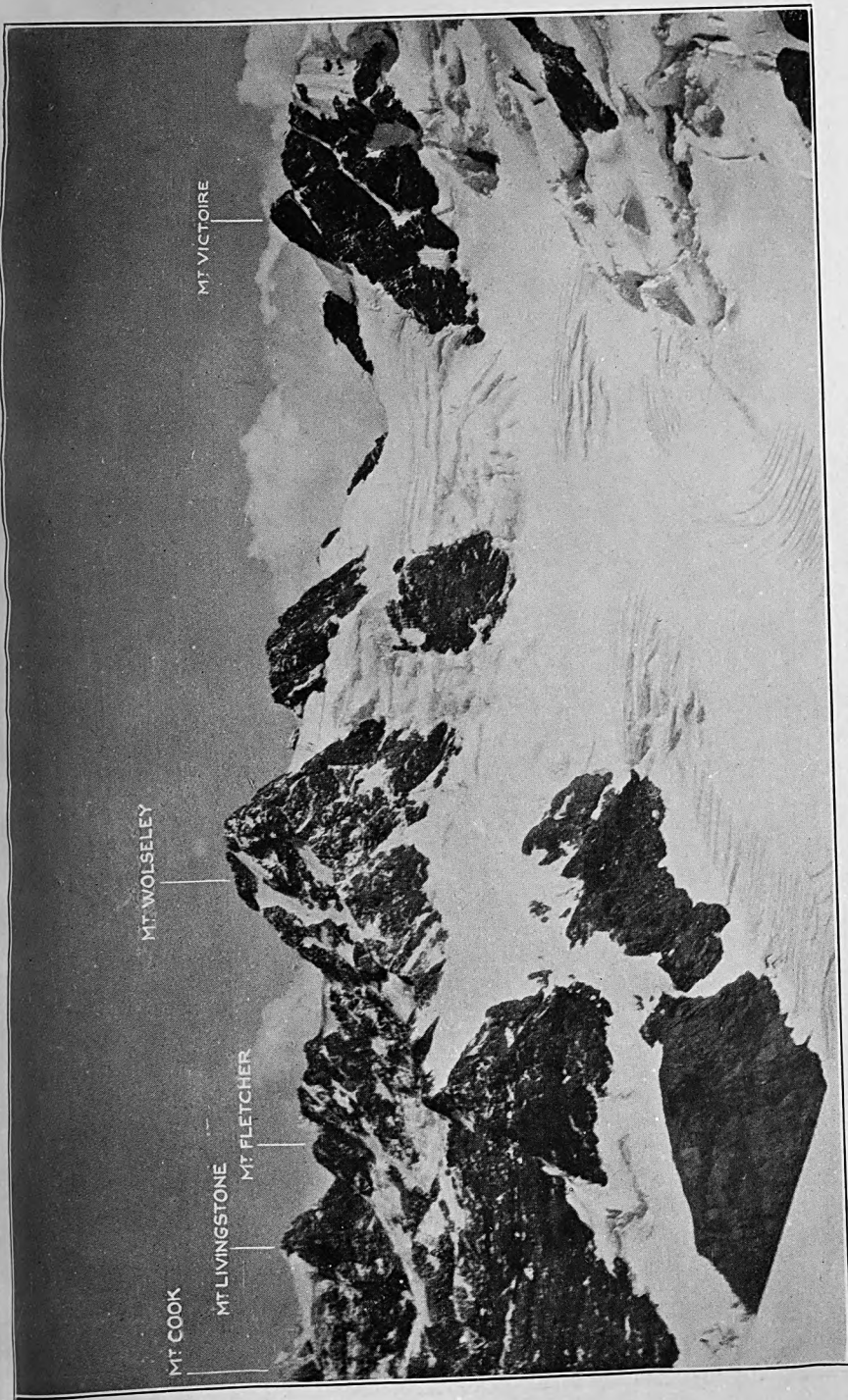
stand up majestically, sharp and clear against the skyline. So far nobody has set foot on the Divide between Mannering and Moffatt, but we hope to make an attempt on it next year. There are not likely to be passes of any practical value across to the West Coast from the Classen. From the top of Mannering there is a splendid icefall which is the source of the Classen, and another glacier, much less broken, comes down from the Classen Saddle, which leads into the Murchison District. These two streams of ice unite to form the Classen.

It has been my good fortune to spend a couple of days on the Classen, but conditions were very different on each occasion. On the first, three years ago, we plodded along in the teeth of a bitterly cold nor'-west gale, in order to meet our guide, who was coming over from the Malte Brun hut on the Tasman Glacier. We met in a snowstorm at the foot of the Classen Saddle and turned for camp at once. Not a peak could be seen, as all were shrouded in mist and rain. This year we spent a beautiful day in the Classen searching closely for routes up the peaks, but as we were at the end of our leave we could do no actual climbing. But it was a glorious sight, and our regrets were very keen when we had to leave it behind for another year.

Between Mounts Moffatt and Livingstone a short spur comes off the Divide. On one side is the Classen, on the other is the Grey, a tributary of the Godley, while at its end the Godley flows slowly by. At the end of this spur is a little dome which Messrs. Williams, Kennedy, and myself climbed four years ago, on our first visit to the district. We named it Panorama Peak, for it is the finest viewpoint in the district, commanding a view of all the main glaciers. On the northern side of this spur, facing the Grey, are some magnificent cliffs, about 3000 ft. in height, down which some huge avalanches may be seen falling, and they form one of the most prominent features of this portion of the Southern Alps.

The largest tributary of the Godley is the Grey Glacier, which flows into the main ice-stream about two miles from the terminal face. It has a very beautiful icefall about half way along its course, just where it makes a right-angled bend. From its upper reaches Mount Loughnan, with its four-pointed crest, and Mount Frances may be attempted, but so far we have not tackled these two peaks.

Just to the N. of Mount Frances another spur leaves the Divide, separating the Grey Glacier from the Maud. On this spur are two peaks, Mounts Fletcher and Gordon. The lower



FROM NEAR SUMMIT OF MT. PETERMANN.

Photo T. A. Fletcher.

peak of the former was climbed and named in my honour by Messrs. Kennedy and Lipp three years ago, while I was making a trip down the valley to replace some stores we had lost through our camp being burnt out. Mount Gordon was climbed by Messrs. Williams, Kennedy, and myself four years ago. We had established a bivouac at its foot, and climbed the peak in order to make a reconnaissance.

On the other side of the Maud Glacier is a spur on which is Mount Wolseley. In the maps this peak will be found to be placed on the Divide, but we have now definitely proved this to be wrong. Wolseley is a very fine peak indeed, and provides what I should think will prove to be the finest rock-climb in our Alps. It was climbed by Messrs. Kennedy and Lipp last year.

The Maud Glacier is a very beautiful one. It is not wide, and some of the larger schrunds give some trouble in crossing. We traversed its entire length four years ago in an attempt on Wolseley, but were misled by the map. As the peak we had taken to be Wolseley (and which proved to be so) was left behind us when we had reached the saddle, we made for the next peak on our right, got into a very difficult and dangerous place, and so arrived at the base of our peak too late to make an attempt. As a matter of fact, we were enveloped in fog for about three hours and had to make our way home very cautiously.

The Godley is a very typical Canterbury glacier. It is very heavily encumbered with moraine for more than two miles above the terminal face, thus providing a long, wearisome 'grind' for those who would explore the beauties of the peaks higher up. The slope is fairly gentle, and crevasses, though numerous enough, are not really troublesome. It drains the whole of the eastern side of the Main Divide from Mount Livingstone to McClure.

About three miles from the head is a low pass (5800 ft.) leading over to the West Coast. At the beginning of the year we crossed this pass, endeavouring to push through to the West Coast. We descended about 2000 ft. by the Joyce Glacier, which flows down a narrow winding valley. It ends abruptly in an ice-wall at least 200 ft. high, down which an accident occurred about thirty years ago, when Mr. Lean slipped and fell to the bottom, breaking some ribs and bruising himself very severely. We crossed this ice a little above the face and descended on the avalanche snow, which fills the valley for about another half-mile. This snow evidently falls down

in enormous quantities in the spring, and a journey down this valley early in the season would be a rather dangerous one.

From this glacier runs the Scone Stream, one of the roughest of rough creeks. It was not till we had had actual experience of these streams in their virgin state that we were able to appreciate fully the work of Messrs. C. E. Douglas and A. P. Harper in the early 'nineties. Although the description of these valleys in 'Pioneer Work in the New Zealand Alps' is very fine, we were all convinced that it fell far short of actual reality, which was beyond the power of words to describe. The valley is very steep, but wonderfully grand. Its floor is strewn with giant boulders in great profusion and confusion, and at times a pathway down the river-bed becomes an impossibility. We had then to take to the mountain sides, and force our way through the dense sub-alpine scrub, which was ten times harder work than the river-bed. Finally, after taking nearly all day to do about three and a half miles, we were stopped by a great bluff about 4000 ft. in height, at the foot of which the torrent raced both deep and strong. To cross the river was impossible, though perhaps later in the season it might prove fordable, and so we were reluctantly compelled to retrace our steps.

Just N. of this pass is Mount Petermann, one of the prettiest peaks of the district. Standing between two low saddles, up which the fog travels, it is often bathed in cloud or mist, and provides many glorious opportunities for the camera man. We climbed it for the first time this year. It is not particularly high, but it gave us a very strenuous climb on a scorching hot day. Going up we kept to the rocks as much as possible, as the heat of the snow was unbearable, but we came down on the snow, which was lying so steep that we had to face it and go down hand over hand.

Further N. are the peaks of Malthus, Dennistoun, and McClure. The first two we climbed in January of last year, both of them being then unnamed peaks. Dennistoun, which, by the way, is a very 'rotten' peak, was named after the late J. R. Dennistoun, A.C., killed in the war, who had passed through the Godley on three occasions. Malthus, a lower peak, was named after our friend Rex Malthus, of Lilybank Station, to whom we have always been under a deep debt of gratitude for the assistance he has rendered us on all our expeditions. McClure, still unclimbed, is right at the head of the valley, at the spot where the Two Thumb Range branches off the main range.

On the Two Thumb Range, close to the Divide, is the Terra Nova Saddle, crossed and named by Dennistoun several years ago. Close by is the rock peak of Pyramus, also named by him, and then the range forks. D'Archiac, the highest peak in the district, is on the spur that flanks the southern side of the Godley Glacier, and was climbed by Dennistoun, Earl, and Clarke. Farther S. on this spur is Mount Forbes, and then comes Mount Sibbald, the second highest peak, 9161 ft. in height. Messrs. Williams and Kennedy climbed this peak in January 1918.

Except last year, our parties have always been very unfortunate with weather conditions, and thus our record has been very disappointing, to us at any rate. However, we have now thoroughly explored the whole district and examined and photographed the different peaks, so that we are ready to renew the battle. We know where to bivouac in order to be within easy access of them, and look forward with keen pleasure and anticipation to the coming season.

Without doubt it is a beautiful district, and we have been fortunate in finding a valley in which there are so many unclimbed peaks. It is unfortunate that my old companion, Mr. W. A. Kennedy, who organised the first three expeditions, is not able, owing to a strain, to continue, but I hope that next February will again find a party of us camped in the Godley Valley. Further details of the expeditions are given in the 'New Zealand Alpine Journal.' We have had some strenuous times and some great experiences, but we are rich in memories of many pleasant days spent under our canvas roof, or, better still, when roped together on the pure and spotless snows.

NOTE.—Mr. Fletcher's paper is accompanied by the Government 1-in. map, in which he has marked many new names, as well as by further photographs now in the Club Library.

SOME ASPECTS OF THE EVEREST PROBLEM.

By T. G. LONGSTAFF, M.D.

(*Medical Officer to the Expedition of 1922.*)

IN the following notes it is assumed that the reader is already familiar with the narratives of Mallory and Finch, which have been published in the Alpine and Geographical Journals. Nothing will be found here which does

not tally with these accounts, but the writer feels that certain points in the problem deserve greater stress than has, so far, been laid upon them. Nor is there here the faintest intention of any criticism, except in so far as the climbers have belittled their own achievements. On the Second Expedition to Mt. Everest I was, as far as climbing went, a mere spectator; but a spectator can write perhaps more freely than an actor. Actors suffer from modesty, while a spectator sees more of the game than any single player. For instance, a spectator like myself can best recognise a fact, which on my return I find had not been universally realised, that the climbers were well advised to lose no time in making the first attempt and in sending four men on it. Had not the two attempts been made when they were, the expedition would have returned with far less results, if indeed it had accomplished anything. As to the value of those results I would quote Dr. De Filippi, a critic whose judgment no one will challenge. He writes: 'I could never have hoped that you would have accomplished so much in one single year.'

Turning to details, dare I again repeat the opinion which I have expressed often before, that I do not believe in trying ascents in the Himalaya after the monsoon. This belief I formed when I first tested the problem seventeen years ago, and it has been strengthened by every subsequent visit. I do not believe that an autumn ascent is impossible, but I think the snow conditions at that season, especially on Mt. Everest, are likely to be too dangerous; and I agree with Farrar that 'do or die' principles do not accord with the ethics of the Alpine Club. A light monsoon ending unusually early in the season would obviously modify the normal autumn conditions very greatly to the advantage of the climbers.

As to the composition of the climbing party, almost every conceivable combination of numbers for the final ascent has its own special advantages. A party of one European with one or two Sherpas would have an excellent chance, and their entire transport and supply problem would be reduced to very simple proportions. With a very small party the intermediate Camps 1, 2, and 3 would not need to be continuously and simultaneously occupied by members of the expedition. Again, two Europeans would have a better chance of getting to the top than three. Practical considerations will probably limit an oxygen party to two. Four is a good number, especially for an attempt without oxygen and when more food can therefore be carried, because if one falls out another can be spared

to take him back to the last camp. A man must, of course, always retire before he breaks down. On the whole, it seems that either a very small party, or a party of about eight climbers plus four transport officers, is the ideal. To get the utmost out of the porters such linguists as the two Bruces, Morris, and Crawford are essential. Language difficulties were accountable for at least one case of lack of co-ordination at the high camps, which might have seriously affected the success of the expedition.

As to the climbers' age, while twenty-five to thirty is probably the ideal, yet individual variation is so great that each case will have to be taken on its merits. Owing to the War, the supply of young climbers is more limited than formerly. There is also the difficulty that experience of snow and ice conditions at different seasons and in several parts of the world is a desirable qualification. It is urgent that a sub-committee should get to work at once for the selection of next year's climbing party.

With regard to outfit, the expedition was greatly indebted to the labours of Farrar, Meade, and Unna. The outfitting was splendidly done. But a few suggestions may be put on record. For a large party involving continuously and simultaneously the occupation of four or more camps, more tents will be required, and very much more artificial fuel. Irrespective of the size of the party, each climber should have at least four eiderdown sleeping bags—one for each of the four highest camps; this simplifies transport and increases mobility. Clothing must include light wind-proof Arctic kit, which must be assumed *at once* in case of wind. Boots should be of thick felt with a nailed leather sole sewn on underneath. This problem should be taken in hand at once: it is vital. A sledge is necessary to take a sick man over the soft snow from the foot of the N. Col to half-way between Camps 3 and 2. Beyond this point the Norwegian back-carrier proved better than a stretcher. I believe that Eosine powder, to mark the track on snow, would have saved the first party much time, anxiety, and danger on their descent to the N. Col.

Enough stress has not been laid on the abnormal type of evaporation at these very high altitudes. Owing to the dryness, combined with the increased diathermancy of the air, evaporation is incredibly rapid. It is scarcely an exaggeration to say that above 25,000 ft. snow does not melt, but evaporates literally into thin air. Thus ice is rarely met with at great altitudes. We got our first good view of Mt. Everest from the

Pang La on April 28. The whole N. face of the mountain was then so completely free from snow and ice that it was long before I could be persuaded that this was indeed Everest. Such conditions obtain even at lower altitudes, and snow lies but a very short time on the Tibetan Uplands. We awoke at the Base Camp on June 4 to find four inches of snow on the ground: by 10 o'clock the ground was dusty. Glaciers have no streams worthy of the name (at any rate before the monsoon), because their surface ice evaporates directly into the air. Thus are produced those fantastic pinnacles and towers which characterise the northern glaciers. Somewhat similar conditions prevail on the N. side of the Karakoram; but there honeycombing of the surface is the more noticeable effect. This abnormal type of evaporation was the cause of the fatal avalanche. On the *shady* slopes at these great altitudes a layer of new snow does not melt downwards in the ordinary way and freeze on to the layer beneath; rather it evaporates upwards and tends to form a homogeneous brittle layer, which, like a thick crust, may break off as a separate unit. Strutt tells me that somewhat similar conditions occur amongst the Alps in winter. I venture to add my personal conviction that though snow and ice conditions vary the world over in far greater degree than do rock conditions, yet in the different parts of the Himalaya alone these variations exceed those found in all the rest of the world put together.

The loss of body fluids by evaporation is, in my belief, a grave element in mountain sickness. Thirst is a terrible trial at great altitudes, and I think had much to do with Morshead's breakdown. The obtaining of the necessary minimum of drinking water is as difficult as any problem we have to face. Some type of Arctic snow-melter is an absolute necessity. The solid spirit we were provided with is the most convenient form of fuel: there may be technical objections to its use at the highest camps, but if so these could be resolved by experiment in the pneumatic chamber. I believe it could be used safely inside a tent, thus eliminating the danger of frost-bite to the cook. It is easier and better in every way to utilise ice rather than snow, but it is unlikely that ice will be obtainable at the high camps.

In reviewing the evidence as to the value of oxygen, I will endeavour to confine myself to the facts and to refrain from theory. But nothing is harder than to arrive at the true facts of any problem—except, perhaps, to state them

impartially. In dealing with the mere figures, the rate of ascent and descent per hour, every mountaineer knows that no two ascents can ever be exactly comparable. In the present case the figures must be read in strict relation to the accounts of Mallory and Finch already published. Any mountaineer having read these will appreciate that the figures for the two final attempts are not fully comparable one with the other, because the Second Party traversed a much greater horizontal distance than the First Party. Again, the descents from Camp 5 to the N. Col are even less comparable, since the First Party were here burdened with a sick companion. The times of Strutt's Party of May 17 have, therefore, been utilised for the descent of the N. Col without oxygen. The point reached by the First Party proves by theodolite to be 26,985 ft., but the writer's mathematical limitations make a round number preferable.

Ascending.	First Party.		Second Party.	
	Without Oxygen.		With Oxygen.	
	Hours.	Feet per Hour.	Hours.	Feet per Hour.
21,000-23,000	4	500	3	666
23,000-25,000	4½	444	3¾ (to 25,500)	666
25,000-27,000	6¼	320	5½ (to 27,250)	318*
Descending.				
27,000-25,000	1½	1,333	2½ (to 25,500)	700*
25,000-23,000	7½	—	1½	1,666
23,000-21,000	1¾	1,200	¾	3,000

* These rates are not comparable because of the much greater horizontal distance traversed.

The remaining evidence is more circumstantial, and therefore more difficult to weigh. The First Party turned back only because of the lateness of the hour. When they got down to the Base Camp they all agreed that they had not reached their limit, and professed that they could have gone to the top, so far as their physical sensations indicated.

The Second Party turned back at noon. I regret that Finch's modesty has not permitted him to be more explicit as to the incident that probably decided their retreat. When the accident to Geoffrey Bruce's oxygen apparatus occurred, he was on a rather steep slab. He struggled on, his strength failing under the onset of unconsciousness. Before he could fall, Finch dragged him up the slab and Geoffrey Bruce collapsed beside him. It is bare justice to record the opinion I formed, at the time and on the spot, that Geoffrey's life was only saved by Finch's forethought in providing himself with a Y piece and spare tube so that both could breathe from one apparatus, and by Finch's skill in making the repairs. On the other hand, it is clear from the Second Party's intermittent use of oxygen at night that physiologists have over-rated the danger of cutting off the supply, at least when at rest. To sit down at once, in the case of a similar accident while climbing, may be a sufficient remedy. But those using the apparatus should be trained and skilled in its use. In further palliation of this risk, it is to be noted that Tejbir, who broke down at 26,000 ft. when using oxygen (and carrying 50 lbs.), descended alone (probably using oxygen) to Camp 5, and after a rest there (probably without oxygen) was able to descend to Camp 4 the same evening. Finch and Geoffrey Bruce deserve our unstinted admiration for performing an experiment which they had been warned, even by members of the committee, might be of grave danger to themselves. It is no reflection on them to assume that it was this accident, so ably met, that actually decided a retreat in this instance. For it is noteworthy that, despite the gruelling they had endured at Camp 5 and their famished condition, they accomplished the long descent to Camp 3—over 6,000 ft.—the same afternoon.

At this point a digression may be permitted. The circumstances in which this great climb was accomplished must always be borne in mind. The climbers had spent twenty-four hours in a furious gale, sheltered only by a frail tent, at 25,500 ft. Their anxiety must have been intense and exhausting. Unfortunately they had only taken up food for one day. Communications were open on the second day between their bivouac and Camp 4. The porters who visited the climbing party on the second afternoon brought up an inadequate supply of provisions. It was in a famished condition that the climbers started on their attempt the following morning. The success they achieved cannot but be of

the greatest encouragement to future climbers, who may reasonably hope to make their attempt under less unfavourable conditions. In this connection it is desirable also to emphasise the circumstances of the First Party. Both parties were compelled by the onset of bad weather to bivouac at a lower point than they had intended. Both parties had to get their coolies back to Camp 4 before the weather got really bad. It was the intention of both parties to camp at 26,000 ft. (Finch in his narrative notes a possible bivouac site at about this height.) It was on this day, the day before the final attempt, that the First Party were frost-bitten. Furthermore, the following morning bad weather delayed their start, and consideration for a sick companion left in camp demanded an early return. Under such adverse circumstances both parties had legitimate reasons for retreating from Camp 5 and postponing their respective attempts. Yet they went on. Their success under the circumstances was magnificent, and gives sure hope of ultimate success to more fortunate climbers.

With the exception of Somervell, the First Party arrived at the Base Camp absolutely played out. They had expended their utmost endurance on their tremendous effort. Morshead's hands and feet were in a very serious state from frost-bite. Somervell, who had had much experience of such conditions during the War, considered that amputation would be necessary, but warned me not to operate except under certain circumstances. He and Wakefield agreed with me that Morshead must be taken back to normal levels as soon as possible. I wrote a formal medical report to General Bruce to this effect. I also examined the other three, and reported that Mallory and Norton were unfit for further attempts. Their frost-bites alone were reason enough to invalid them, because a recurrent exposure would probably have led to the loss of hands or feet. Norton had undergone a great additional strain in helping Morshead down. Mallory's responsibility must have been exhausting: that he supported his companions' dangerous slip shows that he was equal to the strain, but he must have drawn heavily on his reserves of energy. It is difficult to estimate the effect of such mental strain on the physical condition when the margin is already reduced to such narrow limits. Somervell appears to be physically incapable of exhibiting the symptoms appropriate to his physiological environment; he showed no signs of exhaustion, except a few superficial frost-bites on his fingers. I considered him to be the only

one of the six high climbers who remained fit for a second attempt. Nevertheless, it is suggestive of the value of oxygen that the worst cases of frost-bite occurred in the First Party. The Second Party report that they were greatly benefited by taking small quantities of oxygen during their second night at 25,500 ft. ; considering their lack of fuel and food, I do not doubt that they would have been badly frost-bitten without this aid.

Against oxygen it must be recorded that on and after their arrival at the Base Camp, though both parties had played themselves out, the general physical condition of the Second Party was distinctly worse than that of the First Party. By using oxygen, the Second Party put their engines under 'forced draught' ; they were enabled to take more out of themselves ; because of it they desired more food. Judicially, there is no evidence that the Second Party would have been more or less exhausted than the First Party if neither had used oxygen. There is obviously no proof that the Second Party could ever have attained 27,000 ft. without its use. But if it were a fact that they could not, then we have the strongest argument that can be advanced in favour of oxygen : that its use will enable a man to ascend Everest who is physiologically not capable of succeeding without such assistance.

I reported in writing to Bruce that, in my opinion, neither Geoffrey Bruce nor Finch were fit for another attempt. I did not want my companions to run the possibility of a risk of their courage being challenged by anyone incapable of realising the true position. The climbers, however, exhibited no gratitude. Luckily, neither Morshead, Norton, nor Geoffrey Bruce could walk, so they were in my power. But Mallory and Finch persisted in joining Somervell in the last attempt, with Wakefield and Crawford in support, and Morris in charge of the lines of communication, transport, and supply. Finch, however, was compelled by physical weakness to turn back after he had reached Camp 1. The margin of safety was vanishing.

Norton and Geoffrey Bruce were packed off on ponies to Kharta, as from their general condition it seemed probable that they would be restored to health in that comparatively genial region, a Capua so long desired by all of us. But Morshead was suffering acutely, and went steadily downhill ; constant pain kept him awake night after night, and opiates had no effect on him. Strutt, who had spent nearly a fortnight at 21,000 ft. and over, was showing increasing

deterioration, with marked loss of weight. Finch's condition was serious. Impaired constitutions are incapable of contending against the bad effects of prolonged residence at high altitudes, and it was necessary to get these men down quickly if permanent damage was to be avoided. Accordingly, we four left Rombuk on June 6, and reached Darjiling in nineteen days, having covered 320 miles without a hitch, thanks to the excellent work of Gyaljen and the assistance of Tibetan officials. The rapidity of our retreat, which excited some surprise and comment at home, undoubtedly saved Morshead's hands and feet. Morshead bore his sufferings with his usual fortitude. Thanks to the following of Somervell's advice, he made a wonderful recovery; but his right hand is permanently maimed by the loss of the first three fingers.

Frost-bite being literally due to deprivation of oxygen owing to the cessation of blood circulation, the deficiency of oxygen in the air breathed at high altitudes produces a very 'vicious circle,' which retarded recovery even at the Base Camp. Very great credit is due to the climbers for asking to be given another chance. It is very well known that high altitudes have a most depressing effect on morale; this is freely acknowledged by the Air Force; such a request, therefore, indicates an extreme degree of mental resolution on the part of the climbers. But it was my duty to give a flat refusal in cases where I believed that perseverance would produce permanent serious injury—or worse. Nobody capable of comprehending what these men had gone through will venture to criticise such a decision.

Noel's experience provides one of the most valuable and hopeful pieces of physiological evidence obtained during the whole expedition. In his case very good acclimatisation occurred during his four days' residence at Camp 4 (23,000 ft.). Many physiologists, including the writer, did not believe that any really beneficial degree of acclimatisation could occur at such an altitude. But with Noel the improvement was undeniable; cinema work at such an altitude is a good 'control test.' At this point I would emphasise the fact that the whole question of the use of oxygen is far more complicated than is generally assumed. Thus the taking of oxygen continuously at very high altitudes must inevitably prevent anything approaching to complete physiological 'acclimatisation' from taking place. Furthermore, a climber who has been continuously using large doses of oxygen on the mountain must, when he descends to the lower camps and ceases to

use it, find himself worse off for oxygen than he was before, because there is still only half an atmosphere at these camps. But if he had *not* used oxygen on the mountain, he would be getting into a richer oxygen supply with every foot that he descended, and when he got down to the Base Camp he would obtain considerable relief from the relatively increased percentage of oxygen there.

Enough of theory : to return to our facts. About a dozen Sherpas spent more than a week at over 28,000 ft. At least half of these made three or four journeys to 25,000 ft. and over, twice carrying loads up to 40 lbs. in weight—all this without oxygen. Statistics of their rates of progress would have been very valuable. They had no cases of frost-bite, seeming to be quite unaffected either by very hard work or very low temperatures, or long residence at very high altitudes. Their youth and the way in which they seized on the sporting aspect of the struggle were their most remarkable characteristics. I had urged that a fresh set of porters should be used for each attempt ; but the first set refused to budge. They refused to share their glory with the others ; it gave them a pull with the ladies ! There appears no reason why some of these lady-killers should not be capable of conquering even Everest without oxygen, and of carrying loads even to 27,000 ft. The organisation and equipment of this corps is General Bruce's outstanding contribution to the Everest problem. The success we achieved this year is really due to his consummate knowledge of the peoples of the Himalaya. I believe we are all agreed that they were better than Alpine professionals for this job.

After what has been said and written, I cannot too categorically state that physiologists (of whom I am one) are agreed that oxygen must be of the greatest value on Mt. Everest ; but its use as a platform missile is to be deprecated. Given enough oxygen, the upward limit for humanity is not reached until above 40,000 ft., where the boiling-point of water falls to 99° F. At this point the climbers themselves will naturally begin to boil too. If liquid oxygen could be utilised a climber could easily carry twenty-four hours' supply and the whole problem would be enormously simplified. But of gaseous oxygen you cannot carry half this amount, and so to make full use of it oxygen must be relayed—and Everest does not take kindly to dumping. I confess that I never believed that anyone could carry our apparatus as high as climbers could get without it. I admit that Messrs. Siebe, Gorman and the Oxygen Committee fairly

scored off me. Still it is inevitably carried at the expense of fuel and food. With great diffidence, as a constructive policy, I advocate that oxygen be taken, but used only as a last resort, and in small quantities. The amount required by different individuals will be found to vary to an unexpected degree, but the less one can do with the better, for the less will its cessation be felt. For getting an exhausted man down it should be invaluable, for here speed is safety. It is a specific for preventing or arresting frost-bite. A liquid oxygen plant at the foot of Mt. Everest may be a possible solution of the problem of weight and relays. For myself, I would like to have oxygen dumped on the top of Everest—and to use it coming down.

What deductions can we legitimately draw from this year's experience? Obviously Bruce has solved the vital matter of porters, without which no advance was possible. As to the possibility of the ascent, since without oxygen 27,000 ft. has been attained, and since only a further '8 of an inch of pressure remains to be relinquished, surely we can agree that it is quite possible to get to the top. Probably some exceptional individuals will succeed without recourse to oxygen, though even such fortunate mortals would accomplish the feat more easily with oxygen. But I venture to protest that Mt. Everest is not an easy mountain—it is pedantic so to miscall it, and not fair to those who will one day reach its summit. The route is straightforward enough—up the ridge from the N. Col. to near the N.E. shoulder, below which point I am convinced that I spotted a good camping-place at a little over 27,000 ft. The chief difficulty seems to be the lack of a good coolie camp site between this and the North Col. Along the N. shoulder it may be possible to get a little shelter by clinging to the N. side of the final ridge. On a windless day the snow ridge itself is probably easiest. The last steep slope may be easier on the S. side—if the snow is safe there. But ultimate success depends entirely on the weather, for no mortal man can face a storm on the final ridge of Everest.

To sum up: it does not appear to have been quite realised that the chances of both parties were irretrievably ruined on the day previous to the final assaults by weather conditions which compelled each of them to camp much lower down than they had intended. For neither of these emergency bivouacs could good sites be found, and both parties suffered directly from this cause. The First Party were all frost-bitten on the day before their attempt. The Second Party were most severely handicapped through being storm-bound at Camp 5. How

excellent it is that both persevered in spite of everything. It is not possible to overrate the hardships which these pioneers endured; nor to overstate the satisfaction of the writer in having been present, though the part of a mere spectator has its inevitable regrets.

I gratefully thank several friends, both Alpine and Himalayan, for their assistance in the compilation of these rambling notes. I cannot close without some brief acknowledgment of our debt to the labours of the First Expedition, and in particular to Wheeler's admirable survey, accomplished as it was under conditions of such extreme difficulty and continuous hardship.

EQUIPMENT FOR HIGH ALTITUDE MOUNTAINEERING, WITH
SPECIAL REFERENCE TO CLIMBING MT. EVEREST.

By G. INGLE FINCH.

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IN climbing Mt. Everest, high altitude may be said to begin at 22,000 ft. when the North Col is approached from the east. Although there is no sharp line of demarcation between what constitutes low and high altitudes, I select the above figure for the following reasons: Firstly, all the strongest and most physically fit members of the Expedition are of the opinion that at 21,000 ft. (Camp No. 3) one's physical functions are practically unimpaired, and good sleep and recuperation from fatigue are possible; but at 23,000 ft. (North Col), owing to the altitude, one's physical functions are impaired; sleep becomes fitful, in some individuals the appetite falls off, and there is a general loss of physical fitness. The conclusion may therefore be drawn that in the case of the most favoured individuals acclimatization to altitude ceases between 21,000 and 23,000 ft. Secondly, up to a height of 22,000 ft., snow and ice conditions approximate very closely to summer conditions in the Alps; above 22,000 ft., however, the state of the snow resembles that met with in mid-winter in the Alps. This high-altitude zone may be further divided into two sub-zones—the first from 22,000 ft. (foot of the steep snow and

ice slopes leading up to the North Col) to 23,000 ft., and the second from 23,000 ft. onwards. The first zone is protected by the North Col from the prevailing westerly wind, whereas the second is fully exposed.

Equipment for First Zone.—Oxygen should be used from the foot of the North Col slopes onwards. No useful purpose is served by tiring oneself through not using oxygen, when, as we have seen, full recovery from fatigue is no longer possible at 23,000 ft.

Clothing somewhat warmer than that used in the Alps in summer is quite sufficient. A solar topee is advisable as protection against the sun, and Crookes' glasses of smoke-blue colour afford complete protection from glare without causing eyestrain and subsequent headache. It is also advisable to wear a veil or similar protection, and not to expose the hands to the rays of the sun. Sunburn is invariably followed by a condition of feverishness which cannot but impair one's fitness.

Equipment for Second Zone.—Above 23,000 ft. conditions change radically. The wind is almost invariably blowing and the cold is intense. The degree of intensity of the latter is comparable with that met with at the Poles, and, indeed, probably often exceeds it. Also, owing to the rarefied state of the atmosphere, cold is much more severe in its effects than would be the case at sea-level. A far greater volume of air is expelled from the lungs, and the air is saturated with moisture at blood heat and under a low pressure. A proportionately more rapid loss of animal heat is the result. The partial pressure of oxygen is so low that, unless the climber has recourse to a supply of oxygen carried by himself, his climbing efficiency is enormously lessened. It follows that the climbing equipment of the mountaineer in this second high-altitude zone should include (1) a supply of oxygen, and (2) warm and wind-proof clothing and foot gear. (3) The use of oxygen increases the appetite, and due provision must be made for a sufficiency of suitable food and drink.

Oxygen Equipment.—The oxygen equipment should consist of an improved form of the apparatus, using cylinders of compressed oxygen, described by Mr. P. J. H. Unna in the *ALPINE JOURNAL*. Numerous other methods of supplying oxygen have been suggested, but these all fail in one or more respects.

In the Leonard Hill bag oxygen is generated from sodium peroxide and water. Already at an altitude as low as 16,500 ft. there is thrown up into the oxygen developed a fine spray (probably caustic soda solution) which settles so slowly that,

even after standing for two hours, the oxygen is still unfit to be breathed. In addition, water is required for developing the oxygen, and at high altitudes water is almost too precious a commodity to be used for this purpose.

Mr. Harkness advocates the use of oil of garlic. He found from practical experience in the Andes (at an altitude of 16,000 ft.) that the smelling of oil of garlic dispelled his symptoms of mountain sickness. He offered as explanation that oil of garlic contains much oxygen and emits this oxygen freely. Oil of garlic certainly does not do this, but it may possibly act in another way by stimulating normal involuntary breathing.

The Administration of Oxygen by Subcutaneous Injections.—I shall refrain from discussing the possible value of oxygen administered in this manner, but will content myself with merely pointing out what seem to me to be weaknesses in the proposed method of administration. Presumably such subcutaneous injections would be employed only at high altitudes, say, 25,000 ft. or more, in the hope of thus dispensing with the heavy and bulky oxygen apparatus. At such altitudes, however, the climber must concentrate all his powers of resolution upon one object, namely, the getting to the top of Mt. Everest. I think that the pushing of a needle into his skin and injecting a large volume of oxygen—it must be large to be of any use—would irritate him to such an extent as to divert his mind from the main object. Furthermore, unless the man who operates upon himself is possessed of a certain amount of skill and is mentally still sufficiently alert in spite of the high altitude, he will run the risk of doing himself an injury. The method of administration also leads one to suppose that the needle should be left in position. Owing to the intensity of the cold, this would result in the formation of a considerable area of frost-bite all round the heat-conducting needle. Again, I believe it is suggested that the injection be made in the thigh; with the needle in position and passing through or covered by clothes, laceration of the muscles while climbing would be almost inevitable. I do not know whether it would be possible for an extremely clumsy man to push the needle into a major vein. Should this occur, the results of injecting oxygen would be disastrous. There is one other point. I am not sure that we ought to ask even a climber to insert a needle into his skin when, in order to do so, he must, owing to the cold, push the needle through clothes that are bound to be septic and dirty, and so run the grave danger of infection.

With reference to the injection of oxygen under the skin, however, I would like to suggest that physiologists consider the advantage of occasionally flushing out the stale air surrounding the body by allowing a few litres of oxygen to flow from the apparatus into rubber tubes leading down inside the clothing, say, to as far as the knees.

Another suggestion was to take potassium chlorate. The oxygen of potassium chlorate is chemically very stable, and it is not absorbed by the blood, and for all the oxygen you would obtain by this means you might just as well take sodium chloride.

Recently the proposal was made to me very earnestly indeed that hydrogen peroxide could be used. The method has this in its favour at first glance: the ratio of the oxygen to the total weight of the hydrogen peroxide is a very favourable one (about 16 to 34)—far more favourable than in our oxygen apparatus, which weighs about 35 lbs. to about 3·3 lbs. of oxygen actually available. The unfortunate thing about hydrogen peroxide, however, is that—although I believe it has been prepared pure—it is by reason of its products of decomposition a highly endothermic compound, and as such extremely dangerous and liable to explode. Further, the rate at which the oxygen would be given off by a commercial hydrogen peroxide, although controllable in the laboratory, would not be so on the slopes of Mt. Everest.

The Effects of Tobacco.—Captain Geoffrey Bruce, Lance-Corporal Tejbir, and I arrived at an altitude of 25,500 ft. and pitched camp about half-past two in the afternoon. From half-past two until seven o'clock the following evening (that is, for more than twenty-eight hours) we used no oxygen at all. Very fortunately, I had brought with me three packets containing in all thirty cigarettes. About half an hour after arriving in camp, I do not mind confessing that we felt a little bit miserable. We had been exposed to a considerable degree of cold and wind, and warmth once lost does not, at that height, return very quickly to one's members. I also noticed in a very marked fashion that unless I kept my mind on the question of breathing—that is, made of breathing a voluntary process instead of the involuntary process which it ordinarily is—I suffered from lack of air and a consequent feeling of suffocation. By forcing my lungs to work faster than they would have done of their own accord, I would recover and again become normal. There is a physiological explanation of this phenomenon. The partial pressure of carbon dioxide in the blood falls below

normal because it is washed out of the system owing to the enormous volume of air which one inhales in order to obtain a sufficient supply of oxygen. Carbon dioxide stimulates that nerve centre which controls one's involuntary breathing.

About 4 o'clock that afternoon I smoked a first cigarette, remembering how often in quite different situations the mere act of smoking had distracted the attention from unpleasant things. I was joined by Geoffrey Bruce and Tejbir, both of whom had been experiencing the annoying necessity of having to concentrate on breathing the whole time. After the first few deep inhalations of the smoke, this was no longer necessary, although at first we had to pant a little on account of the time during which the lighting of the cigarettes had interfered with our breathing. Evidently something in the cigarette-smoke acted as a nerve stimulant in the place of the carbon dioxide in which the blood was deficient and, making breathing once more an involuntary process, relieved us of the need for constantly keeping our minds fixed on the controlling of the lungs. The effect of a cigarette lasted for about three hours, so that by 5 o'clock the next afternoon our supply was consumed. At 7 o'clock, rather sorely craving a substitute, we had recourse to the oxygen apparatus. Instead of breathing the normal two litres per minute each, we contented ourselves with about half a litre between us. This amount not only sufficed to make us feel much more comfortable and less cold, but it also enabled us to obtain the first sleep which we had had at this great altitude.

It is not yet known what the stimulant contained in cigarette-smoke is. It is not likely to be carbon monoxide. I have carried out laboratory experiments, in which an intermittent current of air at a pressure of 380 mm. was drawn through a cigarette, lighted at the beginning of the experiment by means of an electrically heated platinum wire. The gases after washing through glass-wool moistened with dilute sulphuric acid were colorimetrically tested for presence of carbon monoxide on absorption through iodine pentoxide. The results were negative. Perhaps the stimulant is pyridine, which is present in comparatively large quantities in tobacco-smoke. Pyridine is frequently used in the laboratory for the extraction of certain constituents from coal, and it has been independently observed by several research workers that the slight traces of the pyridine in the air of the laboratory have, for the first few days, a distinct stimulating effect upon respiration.

Morphia is another stimulant which has been suggested.

I cannot speak with authority about morphia, but I should be very glad to have medical opinion as to the exact nature of its effects at high altitudes. It must always be borne in mind, however, that a man has no business to be at 23,000 ft. on the slopes of Mt. Everest unless he is feeling fit and practically immune at that height from the evil effects of high altitude.

Clothing.—I would recommend clothing on the following lines: One suit of thin silk underwear, followed by a suit of (1) light woollen underwear, (2) medium-weight woollen underwear, (3) heavy-weight woollen underwear, and a loosely fitting woollen sweater with trousers of the same material. In order to keep the abdomen completely unrestricted, nether garments should be supported by braces. Two-piece under garments are preferable to one-piece, as they provide a double protecting layer round the abdomen. Over all should be worn a suit of warm and windproof clothing consisting of (beginning from the inside) a layer of thin flannel followed by a layer of duro-preened light canvas, green in colour, another layer of light flannel, and a layer of transparent oiled silk of yellow colour. The coat should be made in blouse form with a hood, fur collar round neck to act as a brake upon the efflux of air from between the clothing and the body, a narrow fur band round the abdomen for the same reason, and likewise fur bands round the inside of the cuffs. Suitable tapes should be provided at the neck, round the waist and round the wrists, by means of which these openings can be comfortably closed. The trousers, fashioned on the same lines, should reach to the ankles and be provided with tapes for binding at the ankles and just below the knees (to prevent dragging on and hence impeding the action of the knees). Trousers should be supported by braces.

Gloves.—I wore one pair of thin woollen finger gloves, one pair of lambskin gloves, and one pair of duro-preened canvas gauntlets with a lining of flannel. My hands kept warm, and I was able comfortably to manipulate the oxygen apparatus.

Headgear.—The R.N.A.S. pattern helmet is the most suitable form of headgear, with a chin-piece covering the whole of the face up to the nose. Crookes' glasses, let into a mask lined with soft fur and large enough to cover the remaining exposed portion of the face, complete the headgear.

Footgear.—Leather is too good a heat-conductor, and reliance should not be placed upon it for warmth. The uppers of the boots should be of felt, strengthened where necessary to prevent

stretching by sewn-on leather straps. The felt should be covered by duopreened canvas. Toe and heel caps must be hard and strong ; the former should be high. The sole should consist of thin leather, a layer of three-ply wood hinged in two sections at the instep, and a thin layer of felt. The boot should be large enough to accommodate in comfort two pairs of thick socks. As regards nailing, ten tricouni nails per boot would be sufficient. These should be fastened by screws passing through the leather sole and entering into, but not penetrating, the three-ply wood.

Short-length ankle putties will prevent ingress of snow into the boots. Climbing irons are unnecessary.

Food.—Altitude does not impair the appetite, at all events when oxygen is used. Food, together with the necessary fuel (Meta) for cooking, should be made up in 10-lb. parcels contained in three-ply wood cases and clearly marked 'for high altitudes only.' A light tin-opener, a box of matches (Swan wax vestas or equally reliable 'strike everywhere' brand), and a supply of cigarettes should be included in each parcel. The greatest care must be taken in the selection and making up of the contents of these parcels in this country ; the best organizer is likely to be somewhat below par when at the North Col.

Cameras should be of the roll-film type.

Aneroids.—I would suggest considering the advantages of the Pallin barometer. It is a zero instrument and light and robust.

Thermometer.—This should be graduated below zero only, and should be lighter, smaller, and better protected against rough handling than those with which we were supplied in 1922.

Rope.—There are no crevasses above the North Col. A light sash line, say 6 mm. or at the most 8mm. diameter, is sufficient. Fifty feet should be allowed for two men.

Axes.—Light axes with long picks and short hafts are best. The axes should be soaked for a day or two at the base camp and then well rubbed with linseed or similar drying oil.

A discussion followed in which Professor J. B. Haldane, Mr. Freshfield, Dr. Longstaff, Major Stewart (Air Ministry), and Lord Edward Gleichen took part, and Captain Finch replied to questions and gave further information. A full report appears in the Royal Geographical Society's Journal mentioned.

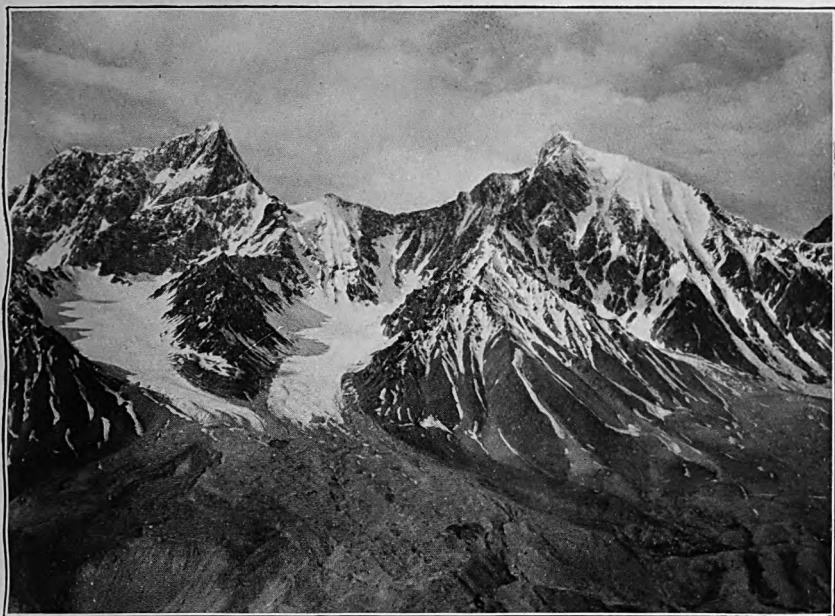


Photo Ph. C. Visser.

TWO 23,000 FEET SUMMITS NEAR SASIR PASS.



Photo Ph. C. Visser.

IN THE SASIR RANGE.
(With Lashi Glacier.)

THE SASIR GROUP IN THE KARAKORAM.

By PH. C. VISSER.

(Read before the Alpine Club, April 10, 1923.)

LET me begin to-night with an excuse and an explanation ! Never in my life did I realise that the English language contains so many pitfalls ! They appear before my mind as symbols of the difficulties with which we had to struggle on our expedition to the Karakoram ; they besiege me in overwhelming numbers and urge me, in the first place, to beseech you to excuse my unpardonable boldness in presuming to occupy this place at all. My audacity, however, must be explained by the fact that I appreciate in such a high degree the honour of speaking before this distinguished audience, although I very much doubt whether my experiences of last summer will be worth relating to a Club which counts among its members such famous explorers, climbers and pioneers of Himalayan and Karakoram mountaineering as Sir Martin Conway, Dr. Norman Collie, Dr. Longstaff, General Bruce, Mumm, Finch, Mallory and many others.

Also I hesitate to claim your attention, when not long ago you listened on this very spot to the accounts that General Bruce, Mallory and Finch gave you of their magnificent exploits on Mt. Everest.

Our destination was the Sasir Group in the Karakorum, a group of mountains S. of the Sasir Pass. As far as I know, Dr. Longstaff with Dr. Neve are the only Europeans who ever penetrated into this region, when they tried to reach the highest summit. We discovered the traces of their camp in the Popache Lungma.

The northern part of this group (N. of the Sasir Pass) was partly explored by Dr. de Filippi's party in 1914, and Mrs. Bullock-Workman also mentions it in her description of the region surrounding the Siachen Glacier.

We reached Leh, coming from Srinagar, on June 5. Via the Kardong Pass we continued through the valleys of the Shyok and Nubra, passing Panamik, and following the caravan-route to Yarkand over a steep and rocky pass in the direction of the Sasir Pass. Before reaching the latter, however, we left the main valley and entered the group of mountains in a southerly direction. Here we explored six

glaciers and three passes and, further, climbed six summits between $\pm 18,600$ and $\pm 20,100$ ft. The choice of the peaks climbed depended on their utility from a topographical point of view ; and they were generally the highest summits in the different valleys.

On August 16 we returned by the same way to the Nubra, and camped a few days at Popache, in the neighbourhood of Panamik, before renewing our attempts to reach the summit of the central peak.

After waiting some days in a camp at 17,225 ft. during a snowstorm which lasted four days, a final effort brought us to a height of $\pm 20,000$ ft., where the climbing became so difficult that we were forced to turn back. In the latter region we were able, however, to explore four glaciers.

In the beginning of September we were back in Leh. A last expedition was our attempt to climb the highest peak of the chain to the S. of Leh, $\pm 20,000$ ft., but a very bad snowstorm drove us back from our highest camp at 18,500 ft.

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A formal introduction to the members of our expedition will not take much time, as our party only included my wife and myself, with the two Swiss guides, Franz Lochmatter and Johann Brantschen, both from St. Nicolas.

Franz is an old friend of many members of the A.C. Has he not scaled nearly every great peak in the Alps with various distinguished members of this Club ?

And Johann Brantschen ? He proved to be a first-rate climber and agreeable companion, very willing, calm and silent. Remarkably silent ! Did, or did he not, speak a dozen words between Rotterdam and Bombay ? Nothing ever seemed to rouse his surprise, though he had never been beyond his native mountains, and could only converse in the Swiss-German dialect. Amidst the strangest surroundings he serenely smoked his pipe, for all the world as if he were sitting on the guides' wall at Zermatt, resisting the dusky crowds of the plains, the clamouring Kashmiri merchants, the grinning lamas and the solicitous Englishmen, who with the best intentions pointed out the imminent danger of sunstroke if he persisted in wearing his native headgear instead of the inevitable topee.

Here is the place to sing the praises of both our trusty fellow-adventurers. They were always in good health and good

humour. Franz, wisely and patiently, supervised the commissariat and the coolies, Brantschen being his right hand. Often, after a strenuous day, the latter replenished the larder with a welcome addition of fresh meat.

As to our equipment: Two Whymper tents for my wife and myself and two Mummery tents for the guides and for use at the highest bivouacs sufficed for all our needs. The two Kashmiri servants had a tent to themselves and the coolies found shelter, when necessary, in some larger ones.

It is needless to enter into further details, as all I could say about mountaineering equipment is well known to you.

I will only add a few words about provisions.

It was necessary, owing to the lack of wood and to the low boiling-point, to rely mainly on tinned food. It is quite possible to cook rice and to prepare meat at this altitude, but the process takes a great deal longer and consequently we had to consider our precious hoard of fuel.

Our scanty supply of fuel consisted mainly of a kind of low shrub that had to be fetched from a distance of several marches, supplemented by dried cow- and horse-dung.

As a reserve we had a few tins of kerosene destined to feed our primus stoves. The latter, however, in spite of tender coaxing, proved to be most capricious and unreliable.

Rice, biscuits, and dried fruit were our favourite nourishment.

A few words will suffice to describe our scientific outfit.

According to my humble opinion, a traveller should not undertake a similar expedition merely from a sporting point of view. The journey makes too great demands on one's time and one's finances to find its sole justification in merely climbing a peak or shooting an ibex. The sportsman who penetrates into these unknown districts should not forget the valuable aid he can contribute to science.

I myself am not qualified to specialise in any of the different domains of science, but I made careful inquiries as to what observations I could make, how to make them, and what specimens it would be useful to collect.

I took some topographical instruments, which enabled me to make a map of the region, as well as aneroids and instruments for meteorological observations, such as barometer, thermometer, wet-bulb thermometer, anemometer, etc. These proved to be of great value. Our collections of geological and botanical specimens were continually being added to during our sojourn in the mountains.

My wife undertook the task of searching for and drying the various plants and flowers found on the Sasir Range up to $\pm 16,000$ and $17,000$ ft., and succeeded in getting together a valuable collection.

We also made observations on the movement of the glaciers. It was interesting to observe that these are in a period of growth.

Three cameras gave satisfactory photographic results.

The medicine-chest was an important item of our outfit. I must confess to utter ignorance in such matters. Even more so, as generally on our arrival at a camp in the neighbourhood of some village all the sick inhabitants were produced for our inspection.

One of the mission doctors at Leh had given me some sound advice on the subject :

‘Never display ignorance. You must always know all about everything. It does not matter what you give them, as long as you give them something.’

So remembering these exhortations, and, on the other hand, feeling decidedly on these occasions, for once, more like angels than fools, we promptly decided to take refuge in the ever-recurring administration of bread pills, a dose of three for serious patients, two for less serious cases, and one for all other occasions. Medicine composed of water and sugar was also used. I must confess that our bread pills and our sugar water proved most efficacious ! And I express my suspicion that real doctors have not always had such grateful patients as I had.

The difficulty in this uninhabited part of the world was to procure and to transport the necessary ‘ata.’ The Government of Kashmir most kindly helped us to solve this problem, and I gratefully remember that not only on this, but on every possible occasion, the said Government gave us their much appreciated assistance.

It is hardly necessary to add that one cause of this favourable state of things was to be traced to the kind efforts of the British Government to facilitate our journey in every way, from the moment when we first landed at Bombay until we were again homeward-bound on the steamer.

With pleasure and with gratitude my wife and I remember the kind hospitality which was displayed towards us by the Governor of Bombay and other persons of authority in British India, but I certainly also owe a debt of gratitude to General Bruce, who, himself besieged by numerous calls upon his time

on the eve of his departure for the Everest expedition, still found occasion to write to us and give us the most valuable hints before we started on our travels.

More than once during the months that followed, when we were wending our way across sandy wastes and snowy passes, our thoughts went out to him and his little band of gallant men struggling to conquer that most mighty of monarchs, Everest.

But—as the French say—to come back to our sheep, or in this case to our coolies, I cannot take leave of them without adding a few words about the men themselves, first speaking about that important subject—their food. I cannot repress a touch of envy when comparing them to the coolies of the Everest expedition. Still, they had some good qualities; they were cheerful and good-humoured as a rule, and also very honest. We never missed any of our belongings. They were like children, and if continually supervised did their work well, although they were very lazy. If left to themselves the result was disastrous. More than once it happened that we sent some of them back to fetch fuel from a depot we had made at a distance of five or six hours, and that they remained absent for more than thirty hours. If we sent another coolie to fetch them back, we could be certain that he would join the lost sheep.

Courage was not a strong point with these people of Ladakh. Several of them could only be persuaded with great difficulty to venture, loudly praying, on to a glacier. On difficult places they gave us great trouble.

They were most horribly dirty. I remember one of them who was so covered with filth that my wife would not permit him to carry anything except some wood or a box with old rubbish. His colleagues were very surprised at this, and commented upon it, shaking their heads.

I must not forget another characteristic of these quaint people which, however, one does not find only in Ladakh: they are crazy about 'backsheesh.' These Ladakhi were indifferent about the wages they had honestly earned, if only they received the desired backsheesh. On our return to the Nubra Valley, and just as we were preparing to make a new start towards the highest summit of the Sasir Range, they were on the point of leaving us in the lurch. I threatened to withhold their pay, without the least result. 'Keep the money,' they cried; 'we are going home.' But before they ran away, they came up and asked for backsheesh!

It was impossible for them to imagine any person doing anything without the hope of gaining thereby some coveted backsheesh. In a missionary hospital Dr. Neve had operated upon a Ladakhi patient, and when he was ready to leave the hospital where he had been nursed and fed without having had to pay a single 'anna' during three weeks, he went up to the doctor and asked for backsheesh; 'For,' said the patient, 'you surely would not have taken all this trouble over me and taken out the tumour, unless you were going to make money over the sale of it'. . . .

This was a story that Tyndale Biscoe tells in his book. We discovered in our own coolies the same train of thought. I am sure they could not understand in the least why these mad sahibs wanted to 'clamber' over the glaciers, as our friend the Aksakal in Leh quaintly put it.

Only one of them had a glimmering of the truth, and he was a philosopher in his own way. Our guides had christened him the 'White Bear,' because of the shaggy appearance he presented, wrapped in a rough sheepskin.

The White Bear had told our interpreter that the Sahib would never have climbed all those high mountains if he had not been sure of finding something of great value there! Perhaps this simple-minded coolie, pondering over the problem, had had a vision of an enormous heap of backsheesh on some mountain-top.

And the White Bear in his primitive wisdom was nearer the truth than he could have imagined; for my wife and I did find something of great value on those high Karakoram mountains, though it was not gold or silver. For we brought back from those lofty heights memories to fill a whole lifetime!

THE AIGUILLE DE ZALLION.

By H. E. G. TYNDALE.

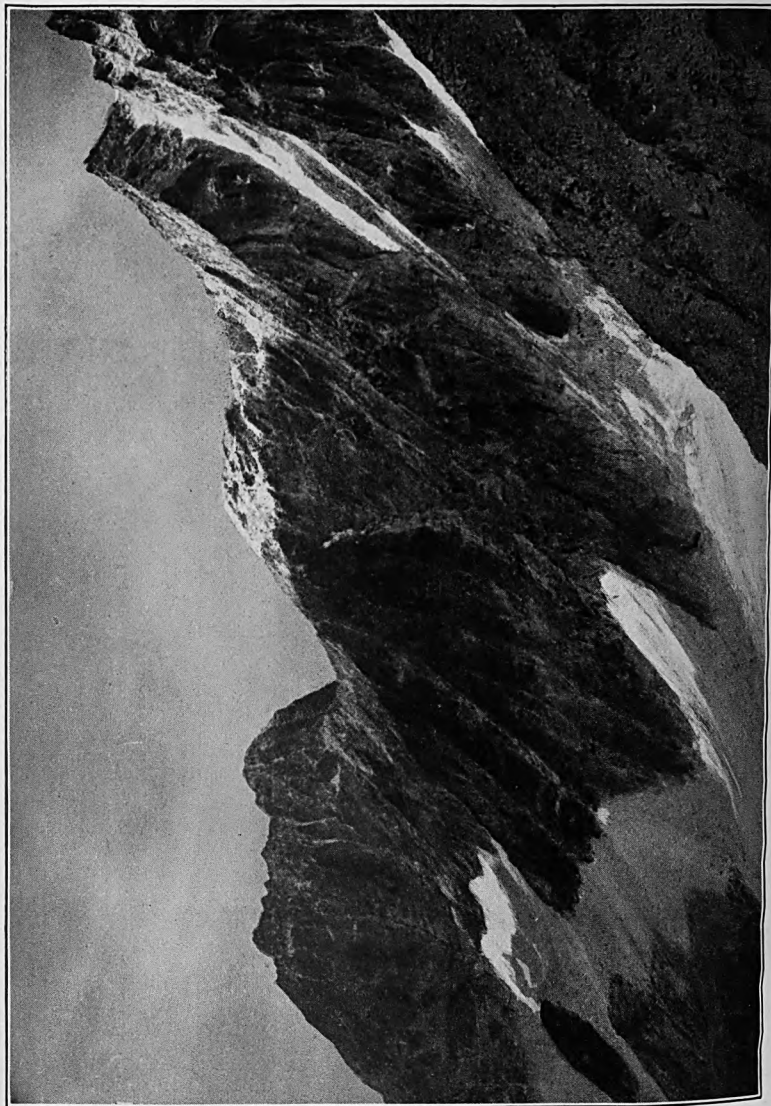
IF you look eastward from the chalets of Praz Gras (where, alas! it is now *défendu* to provide milk for the thirsty conqueror of the Aiguilles Rouges), you will see a long line of cliffs fronting you across the Arolla valley, rising steeply out of an endless wilderness of boulder and fragments of shrunk glacier; cliffs pale yellow and smooth here, grey and broken there, again deepening to a rich chocolate red or

Dent Perroc.

Pte. des Genevois.

Dent de Zallion.

Aig. de Zallion.



FROM NEAR PAS DE CHÈVRES.

throwing out some flattened buttress flanked by unbroken slabs. On the left stands the Petite Dent de Veisivi, sentinel of the valley ; in the centre, Dent de Perroc disputing precedence of height with her neighbour Pointe de Genevois, whence the ridge drops quickly southward to rise at first gradually in gentle curves to the broad, humpy Dent de Zallion, then in a sharper ascent towards the Aiguille de la Za.

Between these two latter points rises a conspicuous sharp summit, nameless hitherto, barely lower than the Za and about three hundred feet higher than the Dent de Zallion. A long buttress runs unbroken up to this summit from the west, broad in its base and clearly very steep, narrowing in its upward course and curving gradually leftward towards the main ridge. Was this, we wondered, a route—perhaps even the ideal way to the Za ? Stone-free, without a doubt, unlike the ordinary western approach to the Za. Let us return to the hotel and see what Larden's guide will say about it.

To our delight, Larden said nothing, and through a fine basking Sunday we were often at the telescope, in no way discouraged that probably the stiffest part of our buttress hid itself behind an outstanding moraine.

On August 14, 1922, before sunrise, Irving and I crossed the torrent and made our way through whatever of pinewood the great rock-avalanches from La Maya have spared. In many places the ground is ploughed up as if from a bombardment ; and probably it would be wise to cut a new path further northward. Hot and breathless as the air had been in the valley, it became clearer and cooler as we approached the moraine, and when we halted for breakfast towards seven o'clock every sign pointed to an unclouded morning of windless calm.

How good is a return to the high places, when the early sun is searching the hollows of the westward hills ! How much to recall every time—that harsh call of the nutcracker as he flaps by fussily in search of new pine-kernels, the black redstart watching from boulder to boulder, and the alpine accenter's note first heard as you clear the trees. Here in the deep grass rises the purple gentian, bearded campanula by the wayside ; and soon aster, viola and vanilla orchid greet you as one long strange to the upper pastures. Thus was that lack of training quite forgotten till the serious business of the day was upon us. The moraine ended abruptly ; below and to the right was the small twisted glacier whose

chief occupation seems to be that of collecting every stone-fall from the Za ; above us stood the blunt end of our buttress. Nearly eight o'clock as it was, the shadow of the rocks mounting steeply to the main ridge some two thousand feet above shut out the sunlight, and would keep us cool for some time to come.

To start at the very lowest point of our buttress was impossible, for there was nothing but vertical slabs. Moving a short way towards the Za, we found a ledge sloping at an easy angle up to the right, past the mouth of a broad, open gully, and continuing beneath an overhang round to that face of the buttress which looked into the heart of a great couloir. This wide cleft separated our ridge from the rocks of the Za, and continued upward, an unbroken icy stone-shoot, to reach the summit crest just north of the Za. Our ledge meanwhile was delectable, if one may here use a word sacred to much more formidable climbing in Wales ; delectable in its abundance of hold, in its wealth of plants—old friends greeting us again from every crack—and in the joy of well-nailed boots gripping once more a firm, rough, rocky surface. Approaching the Za couloir, the ledge became smaller until it ceased beneath a steep red cliff. Progress directly upward seemed possible on such fine rock, but the angle was fierce and we could not be sure of finding a way to a higher ledge, which seemed to the upward gaze to offer promise. Discretion therefore prevailed over valour, and we retraced our steps along the ledge to the broad, open gully. Broken rock and grass soon led to the foot of a small cave, recalling wintry days on Tryfaen. We climbed easily up the right-hand wall ; and just above, where the gully was narrowing into the heart of a forbidding cliff, was another cave-pitch, larger but no more difficult, exit from which would probably lead to the upper ledge noted from below. Away to the left, inaccessible across a curtain of slab, ran the crest of our buttress, still rising steep in its first upward step from the moraine, but well broken and promising soon an easier angle of ascent.

On leaving the upper cave we found, in fact, that a small ledge, again delectable and of the firmest rock, led upward to the right at a comfortable angle, though here and there of an uncomfortable narrowness. Holding was excellent ; nowhere was there any difficulty more serious than a delicate balance round some steep corner ; but though we moved constantly upward, our ledge ran always across the southern face of the buttress, and the steepness of the rock above

forbade as yet all thought of a direct ascent to the crest. Most impressive was our narrow view, above and below, red walls of smooth rock with occasional cracks that sheltered the hardier plants, framed by a cloudless blue above and the cold stony hollow of the *Za couloir* now several hundred feet beneath. We had risen enough to see the hotel and the white chapel among the pines, hidden hitherto by a shoulder of moraine, and imagined busy eyes, fresh from contemplation of a leisurely breakfast, searching out our movements with the telescope—Praz Gras basked in a generous sunlight.

We began to wonder if our ledge would continue his friendly service. Steady progress he gave to be sure, but slow ; and the steep left-hand wall brought a craving for more elbow room. A careful swing round an overhang revealed more open ground, and close above us was the crest of the buttress, now rising gently ; at last we could turn leftward, making for a steep crack. It went beautifully, with the largest and roughest of footholds, and we stood looking far down to Satarma and the Lac Bleu, and the wide range of pasture above Evolena. Our first step was behind us ; the morning was yet young and the weather perfect. While we sat a moment to refresh ourselves with a sight of the distant Oberland, glancing up now and then to take comfort how easy was the next stretch of ridge, we boasted that we had found the one safe, the one quick, simple route to the *Za*, and that too under the very noses of Arolla's experts—Nepioi !

Already we were well above the lowest rocks of the *Za*, and now began to make height rapidly up the crest, where the rock lay broken into broad slabs with an occasional tiny patch of scree. On either side immense cliffs ran down, but luckily there was no call to search their faces for a traverse. A small brown gendarme stood high above us, and beyond him we hoped for another broad stretch at an easy angle ; but we were soon busily at it again, for the ridge grew suddenly steep and its smoothness drove us off to the right. The way was not easy to find ; we rarely got a long view forward, and the more tempting traverses led downward to a fearsome region of slabs dropping holdless for a great depth into the *Za couloir*. A hundred feet or so above us the crest still rose steep and unpromising, and indeed none of the cracks opening on our left looked helpful towards regaining it. Yet as we moved across the face, one ledge leading conveniently to another, we did not often lose height and never the interest of route-finding. Very gradually we neared the

crest ; a short, steep chimney took us up merrily under an overhang that covered a broad level slab, along which wriggling lizardwise and much hindered by rucksacks, we found ourselves again astride the crest. •

By now it was nearly eleven o'clock. Still the formless Dent de Zallion overlooked us from the left across a wide semicircle of grey slabs—of a kind most repulsive to the climber ; though firm enough they were undercut and lay one above the other, like rows of crabs' backs. Thoughts of a traverse over such rock now forced themselves upon us ; for there had come into sight, not far above us, a section of the ridge which even on distant Praz Gras had troubled the imagination ; a section where, if the ridge itself should give no passage, we knew that the S. side was one vast slab, descending in a bare, measureless slope to the Za couloir and broken only by a huge overhang. So two rather anxious men went up a steep, broken face and over a small gendarme, to find a dismaying prospect. It was in truth much more like the edge of a gable than any reasonable arête should be, dark brown in colour, not extremely steep but absolutely holdless. Out of the question to traverse its S. side ; equally so a direct ascent ; there remained only to search for a route among the grey crabs' backs to our left. And here fortune was wonderfully kind : just where our need was the greatest she had built us a ledge across the face, somewhat 'scabreux' in nature, where every hold sloped outward, but nowhere steep or narrow enough to try the balance unduly. True, it took us some way from the crest and gave little gain in height. But at least it led forward ; and where it ran out into smoothness the upward angle was not too severe. From here we could strike straight up for the ridge, still doubtful if it could be reached ; the holds, however, though few and sometimes none too reassuring, were always well placed. Progress was steady, and soon the upper part of the gable was near us. A short downward traverse to the right, and we were almost upon it, separated only by a bulging brown tower which looked too evil to cross. Immediately below, and parallel to the crest, was a stretch of slab, distressingly smooth but not oversteep and leading up towards a crack which if once attained seemed to give certain access to the crest.

I was standing in a broad hold somewhat to the left of this slab, and at first could watch the leader moving upward with great care over the wrinkles of the rock. Clearly it was no place to hold safely the second man, and as the coil of sixty-

foot rope at my feet grew ever smaller my anxieties increased. Was there any prospect of a holding-place? I called up. No reply except a steady passage of rope through my hands. 'No more rope!' 'Unrope,' came the distant answer, and soon the end knot passed out of reach and sight. Few men can be so forlorn as the ropeless. Memory took me back eleven years to the late afternoon of a cloudless Italian day, when I had stood beside a pile of axes and rucksacks at the foot of the last overhang on the S. ridge of the Herbetet, waiting for a friendly rope from the two invisible and barely audible above, 'to join them as best I could.' I now climbed round to the base of the slab, and could see Irving well up in the crack and close to the crest. Soon he was astride, very pleased with life and looking upward confidently. 'We're as high as the Dent de Zallion,' he called down, and got out the spare rope; nearly one hundred feet were needed to reach me, and two or three shots before the knot-end came just within reach. If one must climb slabs by wrinkle-holds when training is bad and balance worse, it is very comforting to have a rope from above; shortly below the entrance to the crack the slab grew steep and a clumsy step would be difficult to recover. It was good to be on the crest again, to look down upon that repellent gable now well below us and shutting out all view of the lower ridge, and to hear a confident voice, 'Steep, but straight ahead now, I believe.'

The difficulties, in truth, were over. Except for the last stretch of slab they had never been severe, but there was hardly any portion of the climb where our route lay obvious to follow, and we had often wondered if some sudden obstacle might not check all further progress. The more pleasing was it now that we need not leave the crest. Very narrow in places, sound and warm to the touch, it never gave trouble, and brought us quickly to the foot of the twin summits. The higher lies to the right, looking from below like a crooked finger: he proved game to the end, sent us round to the S.E. foot, and gave a delightful short scramble round steep corners and up to sit astride of a beautiful rough yellow slab, in great contentment.

Hardly a breath of wind stirred. Towards the E., now first seen across the wide Mont Miné snowfields where a few cloud shadows drifted lazily by, stood the Zermatt peaks, with their host of memories. Westward, we could tell the number of Mont Blanc's attendant cathedrals, shining in that faint icy blue of a fine-weather distance. At our feet the Za

couloir fell grey and forbidding to the moraine where five hours earlier we had roped up ; the Za himself rose sharp and reproachful, not two hundred feet above, and round his foot lapped gentle waves of glacier, promising an untroubled return to the valley. An hour went by unnoticed as we basked and brewed our tea, sleepily recalling the details of our climb ; unnoticed also the sun now too scorching, and a gross darkness gathering slowly over the Aosta valley.

We descended quickly to the N. Col de Bertol, and down over its schrund by a wide bridge, as yet safe though clearly not long-lived. Mont Collon and the peaks of Chermontane were still bathed in sunlight, but already behind them a wall of thick cloud crept forward under a gusty S.W. wind. As we fled down the zigzags towards the lower Arolla glacier, the first grey fingers of storm curled round the upper Vuibez crags, distant mutterings of thunder grew nearer and lightning played about the Aiguilles Rouges. Soon there was a sound of much rain, and a great wind rushing valleyward flung us home, soaked but triumphant, to the welcome of a bedroom tea.

And if we discovered that our route was no novelty, for all our boasting, and certainly a very long way to the Za ; or that its first conqueror apparently had not even thought of recording his victory over a peak to which Siegfried would give neither name nor height : and if Dr. Dübì's admirable guide-book is temptingly ambiguous about the whole matter—what then ? For us it had all the charm of a new route : not a boot-scratch to cheer our way, constant doubt if the next corner might not prove fatal to success, disturbing thoughts of that brown gable and its flanking slabs, and for myself the perfect confidence born of years under Irving's leadership. I must indeed confess to have groaned aloud as that crooked finger beckoning from the summit never seemed to come nearer, but always to mock my bad training, and to have searched out the temptation of an unattractive descent into the icy depths of the Za couloir. Yet as we first gained the crest of our buttress, and knew that at any rate the steepest bit must now lie beneath us, I had thought how Guido Rey himself took heart from a memory of Dante's words—'*Cette montagne est telle, que toujours au bas, dans les commencements, elle semble difficile. Mais plus l'homme s'y élève, moins il y trouve de peine.*'

MONT BLANC BY THE INNOMINATA ARÊTE.

BY G. F. GUGLIERMINA.

(Translation.)

THE problem of an ascent of Mont Blanc by the great arête dividing its S. face into two sections, Fresnay and Brouillard, first presented itself to my brother Baptiste and me on the occasion of our attempt on the Aiguille Blanche de Peuteret in 1912, when bad weather defeated us precisely at the little col utilised by Mr. Eccles in 1876 to attain the upper plateau of the Fresnay Glacier.

We made in 1915 and 1916 serious attempts on this Innominata arête. In the latter year Baptiste and I, with an Alagna porter, reached a point considerably above the little col referred to, my brother climbing a vertical fissure in a smooth slab which proved to be the most difficult bit, in fact the key, of the entire expedition. From the Cabane Gamba it had taken us the whole day to reach this point, beyond which the way was blocked by a colossal icicle which would have entailed long and arduous work with the axe. Accordingly we descended the slab and a less difficult chimney and bivouacked lower down, on a fairly convenient ledge looking down on the Brouillard Glacier.

During the night the weather got bad and by 6 A.M. a thick mist enveloped all the upper part of the mountain. A *tourmente* of snow caught us a bit below the little col and got perfectly furious at the Col du Fresnay, much embarrassing our descent.

To simplify the following description I venture to make a few remarks on the nomenclature of this face of the mountain. I am in full agreement with Captain Finch as to the names proposed by him ('A.J.' xxxiv. 117 *seq.*) for certain points of the Innominata arête such as Pic Eccles for the little aiguille above the Col du Fresnay and Col Supérieur du Fresnay for the little col immediately N. of the Pic Eccles. On the other hand I think it superfluous to rename the Col du Fresnay the Col Inférieur du Fresnay, since it is an old well-known col, often visited, and no sort of confusion can arise between it and the little Col Supérieur. The Cols Emile Rey and de Peuteret are too well established in Alpine literature to be subject to any re-christening.

In August 1919 with our friend Francesco Ravelli, we ascended once more to the Pic Eccles. A long examination of the upper part of the buttress impressed us that for some considerable part the line of ascent would lie along the flank of the main arête quite close to the great couloir on the Brouillard side. We witnessed such frequent stone-falls in this couloir that we arrived at the conclusion that the ascent was too dangerous and gave up any attempt.

A week later, with the mountain in better condition (the weather meantime had been continuously fine and very hot), the memorable ascent of Messrs. Courtauld and Oliver, with the two Reys and Adolf Aufdenblatten, took place. They did not follow the main arête but almost exclusively the Brouillard Glacier and the wall or face above this glacier, which wall they gained after having touched the Col Supérieur du Fresnay, and climbed the 'mauvais pas' overcome by us in 1916 as described above.

Towards the end of July 1921, Ravelli and we were once more in Courmayeur after making the first passage of the Col Maudit (4051 m.), the weather being superb. Well satisfied with having opened a new route up Mont Blanc from the Rifugio Torino by the passage of this col, and with the mountain in favourable conditions, we began to think once more of our old project of the arête de l'*Innominata*.

The afternoon of the 28th saw us *en route* for the Gamba hut with a young man of the village, Lucien Proment, as porter, acquainted so far with the Col du Géant only, but very keen to do a *grande course*. On the 29th the weather not being completely certain we crossed the Col de l'*Innominata* and found the lower part of the Glacier du Fresnay such a labyrinth of crevasses and séracs that almost 6 hours of unheard-of work were needed to get through and back to the hut. Next day we sent the porter down for more provisions and finally about 6 A.M. on the 31st we set out, determined on a serious attack, although the weather was not absolutely certain.

Up the little Valley du Châtelet and the rocks above, we reached the *Innominata* arête a little above the col of the same name and followed this arête rigorously to the summit of the fine point, 3717 m.—5½ hours from the hut. The weather was not perfect and made us rather undecided. After a long halt we roped in the following order, Ravelli, Baptiste, myself, Proment, and undertook the descent of the short N. arête, which nevertheless requires the greatest precautions and

considerable time on account of its extremely broken and crumbling rock. We reached the Col du Fresnay without incident when the first threats of mist and little flakes of snow drove us to a fresh halt. We sought shelter on the Fresnay side and a little later decided to bivouac there. Towards evening the weather mended.

To make myself clear I request my readers to refer to the plates—the one showing the whole of the Innominate arête to the summit of Mont Blanc, the other an enlargement of the portion contained between the Pic Eccles and the main Brouillard arête (S.W. of Mont Blanc de Courmayeur).

On August 1 we set out in good weather and followed first the ice ridge above the col and then the rocky edge of the great precipice above the Glacier du Fresnay. We passed the Courtauld-Oliver bivouac and reached the foot of the very steep snow couloir which leads up Pic Eccles (A on Plate 2). Much to our disgust the snow was ice and our leader Ravelli had much work with the axe as our crampons did not give absolute security.

Once up the couloir we were on the crest of the arête. The passage to the Col Supérieur is not quite easy, astride, owing to very sharp bits of rock; nor the crossing, on the Fresnay flank, of the knife-edge ice arête of the col. From this point we followed our line of 1916 which we found in much better condition than then, being clear of snow. After passing a length of broken rocks the formidable spur soon became vertical. We took to the Brouillard flank on the left and by good rocks followed by a sort of abrupt chimney we reached a very narrow vire or ledge where the wall rises in a vertical slab to the crest of the main arête. We were at our 'mauvais pas' of 1916 (C on Plate 2). The slab joined on its left the wall of a great gendarme, forming a fissure with hand-hold, enabling one to complete the not very long remainder. We thus gained a little terrace (occupied in 1916 by the great icicle) of which the opposite edge plunges into the gigantic couloir on the Fresnay side. From this point, still bearing to the left, one gets round the gendarme across a very narrow brèche and so gains once more the crest of the arête at the foot of a very steep face, of which, however, good holds facilitate the ascent. We found hanging here a short bit of rope. From here the way becomes easier and we arrive over broken rocks and some scree, at the edge of a névé filling the bottom of the little valley or couloir which separates our arête from a secondary arête, on the face above the Brouillard Glacier.

It was at this point (D on Plate 2) that the Courtauld-Oliver party left the main arête to take to the secondary arête.

At this moment we were unfortunately enveloped in mist, so thick as to prevent for some time any examination of the ground ahead. We seized the opportunity to eat while waiting for the view to clear. During our meal there occurred a terrifying fall of stones in the couloir. By good fortune we escaped being struck by any rebounding stones, but we had to admit that our fears of 1919 were not completely unjustified.

However, we decided to proceed, following along the base of the gigantic 'columns' (H on Plate 2) of magnificent red protogine which at this point characterise the profile of the arête. This part of the ascent is over broken rocks and snow until it is possible to attack the flanking wall which offers a very interesting climb up little slabs and almost vertical fissures, not really very difficult, until the crest of the main arête is regained above the 'columns' (D1 on Plate 2).

We had here the feeling of good work done, but our anxiety increased as to the possibility of finding a passage to deal with the great final precipices.

The mist, having remained below, allowed us to study our route. It became less steep and more reasonable, and we followed the crest, alternately snow and rock, to point E on Plate 2, close to the head of the great couloir down which the stones from the famous final plaques or precipices fall. These precipices, we are compelled to admit, allow of no discussion.

A look to our right into the abrupt Fresnay couloir shows no better prospect: immediately above several sheets of black ice, bearing traces of missiles from above, the couloir ends in a veritable chimney, strangled between two ferocious walls, covered with *verglas* glistening in the last remnants of daylight. We abandoned all idea of trying it and descended to point E, where we chose a bivouac on the Fresnay side, a little below the crest of the arête. We estimated the height at about 4400 metres.

Next morning, August 2, we decided to solve the difficulty by a traverse on the Brouillard side. The indefatigable Ravelli, well secured by Baptiste, had heavy work with the axe, in the hardest ice, all across the couloir. The névé is of most impressive steepness and exposed to stones from the moment the sun reaches the rocks above. This work over we reached loose rocks demanding the greatest precautions. We progressed the length of a narrow, very inclined névé, and alternating by snow and rock climbed the flank of the secondary



Photo Gugliermina.

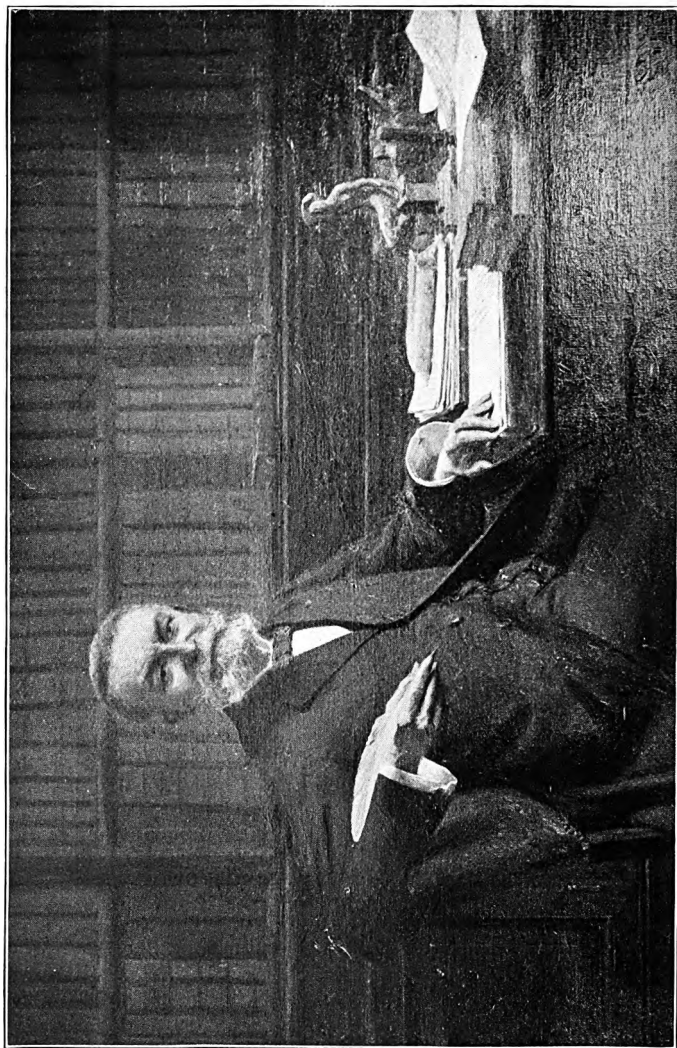
MT. BLANC VU DU MT. PARAMONT (RUTOR).

..... Ascension 1921 Gugliermina-Ravelli par l'arête de l'Innominata.

R G.—Refuge Gamba.
 G B.—Glacier du Brouillard.
 G F.—Glacier du Fresnay.
 1.—Innominata.
 2.—Col Fresnay.
 3.—Pic Eccles.

4.—Col supérieur du Fresnay.
 5.—Mt. Brouillard.
 6.—Col Emile Rey.
 7.—Pic Luigi Amedeo.
 8.—Aig. Blanche de Peuteret.
 9.—Pointe 4,381 m.
 10.—M. Blanc de Courmayeur.

+ Bivouacs à 3,600 et 4,400 m. ça.



M. HENRI FERRAND,
Hon. Member Alpine Club.
(From a painting by T. Bartet in 1917)

arête and joined the Courtauld-Oliver route (F on Plate 2). We followed the crest of this arête which offered no special difficulties and finally arrived above the redoubtable plaques, and took once more to the Innominate arête where it becomes a snow ridge until it merges into the great S.W. or Brouillard arête of Mont Blanc.

We considered the battle won. The weather was perfect; the place made for a long rest and breakfast. We saluted with legitimate enthusiasm our Pic Luigi Amedeo. But a very disagreeable surprise was in store for us. The arête was all ice with a thick unstable layer of a fine hail. The crampons did not suffice on such ground and Francesco presently took to the axe with all the calm and philosophy which the circumstances demanded. Baptiste improved the steps while I and Proment, last on the rope since the start, follow more happy and without trouble. After a fairly long period—the slope seemed interminable—Francesco bore away to the right where rocks emerged from the snow, and, at last, up the final rocky slope, our old love of just twenty years ago, the great Brouillard arête, is ours.

Enthusiastic over the victory, young Proment is in ecstasies, and continues to exclaim 'This is real mountaineering.' We continued either by the crest or on its left flank, and leaving on our right the Mont Blanc de Courmayeur took to the gentle, immaculate slopes of the Calotte, and gained the summit of Mont Blanc a little before 4 p.m. Without stopping we hurried down the Bosses arête to the Vallot hut where we spent the night. Next day the return to Courmayeur is effected by the Dôme route and the Glacier de Miage.

We had the greatest satisfaction over the success of our expedition, gained by our own efforts, not only in the realisation of a long cherished plan, but also in the grandeur and vastness of the surroundings during the whole of our ascent.

This route, planned and effected by the Innominata arête, is the only one, it can hardly be doubted, which offers the means—paradoxical as it may appear—of ascending the Monarch of the Alps, the mountain *par excellence* of glaciers, without touching a single one!

THE RELIGION OF THE MOUNTAIN.

EXTRACTS from a speech delivered by General the Rt. Hon. J. C. Smuts, Prime Minister of the Union of South Africa, on February 25, 1923, when unveiling the Mountain Club Memorial at Maclear's Beacon, Table Mountain :

' . . . Those whose memory we honour to-day lie buried on the battlefields of the Great War, where they fell. But this is undoubtedly the place to commemorate them.

' Nothing could be more fitting and appropriate than this memorial which the Mountain Club of South Africa has erected to the memory of their members who fell in the Great War. And this, the highest point on Table Mountain, is the place to put the memorial. The sons of the cities are remembered and recorded in the streets and squares of their cities and by memorials placed in their churches and cathedrals. But the mountaineers deserve a loftier pedestal and a more appropriate memorial. To them the true church where they worshipped was Table Mountain. Table Mountain was their cathedral where they heard a subtler music and saw wider visions and were inspired with a loftier spirit. Here in life they breathed the great air ; here in death their memory will fill the upper spaces. And it is fitting that in this cathedral of Table Mountain the lasting memorial of their great sacrifice should be placed. Not down there in the glowing and rich plains, but up here on the bleak and cold mountain tops. As Browning put it :

" Here, here's their place,
Where meteors shoot,
Clouds form,
Lightnings are loosened,
Stars come and go."

Here for a thousand years their memory shall blend with these great rock masses and humanise them. The men and women of the coming centuries, who will in ever-increasing numbers seek health and inspiration on this great mountain summit, will find here not only the spirit of Nature, but also the spirit of man blending with it, the spirit of joy in Nature

deepened and intensified by the memory of the great sacrifice here recorded.

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‘And so it has come about that finally in man all moral and spiritual values are expressed in terms of altitude. The low expresses degradation both physical and moral. If we wish to express great intellectual or moral or spiritual attainments we use the language of altitudes. We speak of men who have risen, of aims and ideals that are lofty, we place the seat of our highest religious ideals in high Heaven, and we consign all that is morally base to nethermost hell. Thus the metaphors embedded in language reflect but the realities of the progress of terrestrial life. The Mountain is not merely something externally sublime. It has a great historic and spiritual meaning for us. It stands for us as the ladder of life. Nay, more, it is the ladder of the soul, and in a curious way the source of religion. From it came the Law, from it came the Gospel in the Sermon on the Mount. We may truly say that the highest religion is the Religion of the Mountain.

‘What is that religion? When we reach the mountain summits we leave behind us all the things that weigh heavily down below on our body and our spirit. We leave behind all sense of weakness and depression; we feel a new freedom, a great exhilaration, an exaltation of the body no less than of the spirit. We feel a great joy. The Religion of the Mountain is in reality the religion of joy, of the release of the soul from the things that weigh it down and fill it with a sense of weariness, sorrow, and defeat. The religion of joy realises the freedom of the soul, the soul’s kinship to the great creative spirit, and its dominance over all the things of sense.

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‘The mountains uphold us and the stars beckon to us. The mountains of our lovely land will make a constant appeal to us to live the higher life of joy and freedom. Table Mountain, in particular, will preach this great gospel to the myriads of toilers in the valley below. And those who, whether members of the Mountain Club or not, make a habit of ascending her beautiful slopes in their free moments, will reap a rich reward not only in bodily health and strength, but also in an inner freedom and purity, in an habitual spirit of delight, which will be the crowning glory of their lives.

‘May I express a hope that in the years to come this memorial

will draw myriads who live down below to breathe the purer air and become better men and women. Their spirits will join with those up here, and it will make us all purer and nobler in spirit and better citizens of this country.'

The President of the Mountain Club (Dr. B. Hewat) stated that ninety-six members had joined the colours.

THE AMERICAN MEMBERS OF THE ALPINE CLUB.

Minutes of Meeting held December 2, 1922.

THE fourth Dinner of the Association was held on December 2, 1922, at the University Club in New York City; the following members being present: Allston Burr, J. Ellis Fisher, Le Roy Jeffers, Howard Palmer, H. B. de Villiers-Schwab, and William Williams. The following attended as guests: Messrs. Allen Carpe, Louis Delafield, and J. Monroe Thorington.

Mr. William Williams gave some of his recollections of his Mt. St. Elias expedition, and of earlier climbing days. The second portion of his talk was devoted to explaining a fine series of lantern slides covering mountains in Japan, Hawaii, Canadian Rockies, and the Alps.

Mr. de Villiers-Schwab followed with a short account of the First Mt. Clemenceau Expedition undertaken in July-August 1922, with Messrs. Carpe and Hall. This was illustrated by Mr. Carpe's and his own slides. The expedition was unsuccessful in its main object, largely owing to bad weather, but did accomplish a thorough reconnaissance of Mt. Clemenceau, and succeeded in making one first ascent, Mt. Apex (10,625 ft.).

Mr. Howard Palmer gave an interesting account of the expedition made by him and Dr. Thorington to the Freshfield Group, where they were successful in making a number of first ascents. Some fine slides of Dr. Thorington's were used to illustrate his account. Informal discussion followed the lectures, and the meeting concluded about 11.45 p.m.

In addition to the above expeditions, Mr. William Williams made a trip to Japan and Hawaii in the spring of 1922; during the summer Mr. Val Fynn finally accomplished the difficult ascent of Mt. Victoria by the face; Mr. Le Roy Jeffers traversed

Lassen Peak (10,437 ft.), made some minor climbs in the Salmon River Mts. of Northern California, ascended Mt. Moran (Grand Tetons) for the second time, and traversed it. Mr. J. Ellis Fisher is at the present moment on his way to Chamonix for some winter climbing.

The fifth Dinner will be held in Boston early in May 1923.

H. B. DE VILLIERS-SCHWAB,
Hon. Sec.

11, Broadway, New York City.

IN MEMORIAM.

EDWARD ROBSON WHITWELL.

1843-1922.

ANOTHER of the veterans, whose name often occurs in our earlier annals, started on the long trail on October 14.

Born at Sunderland, January 27, 1843, Mr. Whitwell married in 1873 Mary Janet, daughter of the late E. A. Leatham, M.P., of Misarden Park, Gloucestershire. She, with two sons and three daughters, survives him.

A man of great enterprise and an indefatigable worker, his business interests lay mainly in coal-mining, and he was Chairman and Vice-Chairman of important Collieries.

He was a D.L. and J.P. for the county of Durham, well known with the Zetland and Harworth hounds, a good deer-stalker, and in his later years a keen yachtsman, becoming a member of the R.Y.S.

Mr. Whitwell was elected to the Club in 1868. In 1870, as he has recounted in *ALPINE JOURNAL* v, vi, and vii, he was a member of Mr. Tuckett's Tyrolese party and made, with C. Lauener and Santo Siorpaes, the first ascent of the Cimone della Pala by the N. face, a route dangerous from stones and now seldom taken, the first ascent of the Croda Rossa from Val Buones direct to the summit, a route since taken probably but once and then in descent, and the first ascent of Piz Popena. An attempt on the Pale failed.

In 1871 and 1872 he had the services of Christian and Ulrich Lauener on journeys of three and four weeks' duration. Their expeditions were among the most notable of the time, and in the epitome of Ulrich's Führerbuch, *ALPINE JOURNAL*, xxx. 301 seq., I dealt with them at considerable length, and reproduced portraits of both Mr. Whitwell and Ulrich. In the same volume, 168 seq., Mr. Whitwell gave us interesting reminiscences of early attempts on the Géant and Dru.

His two greatest ascents were made in 1874, when, with Christian

Lauener and his son Johann, he made the first ascent of the Central peak of the Blaitière and an ascent of the Dent Blanche by the E. face, a route probably not since taken. This unfortunate mountain, reputed the hardest of the Pennines in my early days, now has not less than nine routes or variations up its flanks and ridges!

Mr. Whitwell's climbing days ended in 1878 when other pursuits absorbed his energies, but he remained to the end of his life keenly interested in our doings.

J. P. F.

M. A. BAYFIELD.

1852-1922.

THE Rev. Matthew Bayfield died at Hertingfordbury Rectory, Hertford, on August 2, 1922.

He was a Scholar of Clare College, Cambridge, and took a First Class in the Classical Tripos of 1875. He held Assistant-Masterships at Marlborough, Malvern, and Brecon, and when first I knew him had become Headmaster of Eastbourne College. A Classical scholar of originality, and of almost international repute, he edited many texts, chiefly Greek, and collaborated with Professor Verrall and Dr. Leaf.

In a sympathetic obituary notice in the *Times* he was described as a 'many-sided man.' An accomplished linguist, a lover of music and of literature, he was best known, in later years, for his ingenious commentaries upon the text of Shakespeare, and for his experiments, made in conjunction with Professor and Mrs. Verrall, in thought transference. He was a Member of the Council of the Society for Psychical Research. His later works, 'The Measures of the Poets' and 'A Study of Shakespeare's Versification,' were published by the Cambridge University Press in 1919 and 1920.

During the War he lost his wife, and later his only son, a promising naval officer who went down in the *Black Prince*. Hard work remained his only solace. He continued at his books even during his own illness, and performed his parish duty with a cheerful courage invaluable as an example. His last note to myself, written with a pencil, after months of painful illness, contained, characteristically, an appreciation of the facsimiles of Milton's early poems, which I had formerly given him, and expressed his triumph in the confirmation which they afforded him for his theory of Shakespearian 'abbreviations' as a continuous literary tradition.

Bayfield was elected a Member of the Alpine Club in 1875. He did much of his early mountaineering with the late Rev. Arthur Fairbanks, to whose school of finished icemen he belonged. He carried the short light axe invented by Fairbanks, and which has

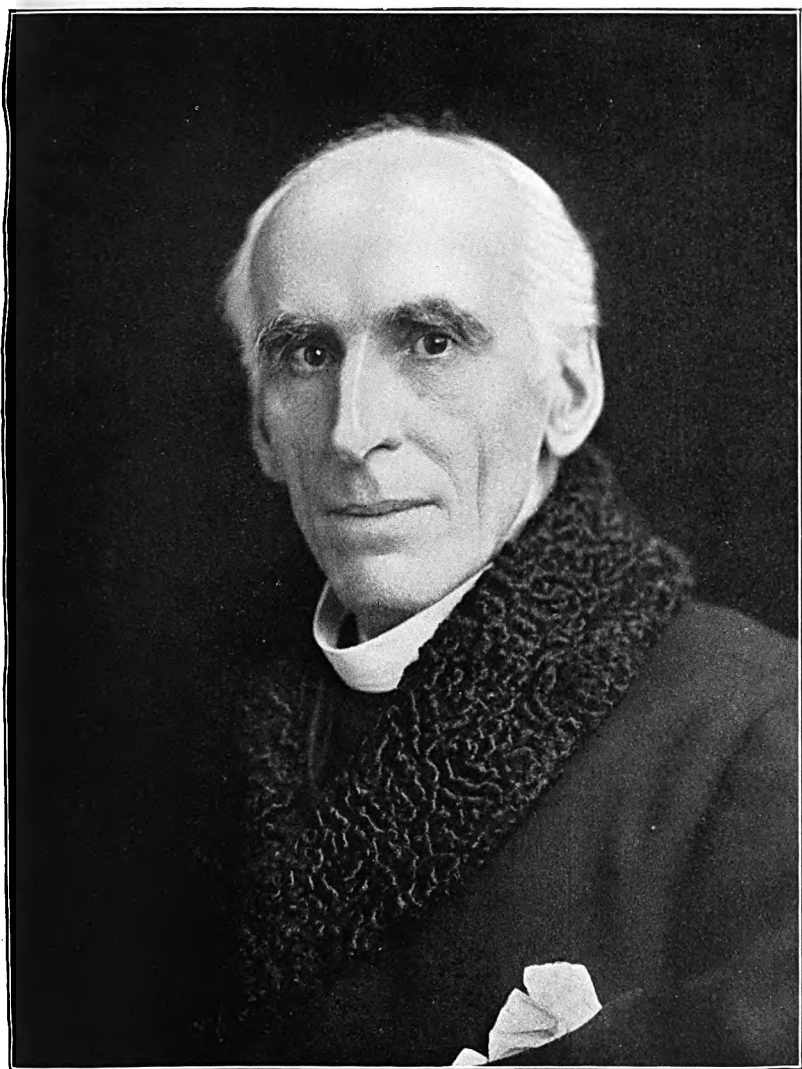


Photo Elliott and Fry.

THE REV. MATTHEW BAYFIELD

lately been revived for use with crampons—although crampons he himself would never wear. Of short stature, he had the perfect balance of the trained gymnast, and to see him and Geoffrey Young on the Great Aletsch Glacier, doing standing glissades in competition down steep slopes of hard ice, was some excitement for the onlooker. On rocks he was superb, climbing, even in middle age, with a rapidity and a perfection of balance unsurpassed by any amateur of his time. Long tramping fatigued him; and his list, therefore, of big Alpine expeditions can give little idea of his remarkable mountaineering gifts. But, even so, I can recall an ascent with him of the Jungfrau in deep snow, a traverse of Mont Collon, and a fatiguing tramp over Cader Idris.

He was little known to the Club. In his mountaineering, as in his studies and in his life, he had no desire for recognition. In all his interests he remained the scholar and the somewhat eclectic connoisseur, cultivated in taste, original in thought, and accomplished in performance. His enthusiasms—and among them his love of the mountains stood first—he reserved for the enjoyment of himself and of his friends. To them he has left the memory of many happy hours, spent in the company of a witty, brilliant, unusual, and very lovable personality.

G. E. W.

HENRY FOULKES KINGDON.

1862–1922.

HENRY FOULKES KINGDON, who died on August 7, 1922, was educated at Winchester. He entered the service of the Marine Insurance Company in 1883, and was appointed manager in 1918.

He was elected a member of the committee of Lloyd's Register of Shipping in 1920, and was chairman of the Institute of London Underwriters for 1921.

Mr. Kingdon had many interests, apart from marine underwriting. As a younger man he had been a keen mountaineer, and he was a member of the Alpine Club. He was an ardent volunteer, and obtained his majority. He was an enthusiastic yachtsman, and was as happy at his carpenter's bench as with his books. Reserved and quiet in manner as he was, many who met him for the first time may not have been able completely to understand him; but those who knew him recognised his sterling character.

C. STEWART KING
(former member A.C.).

RUDOLF LOCHMATTER.

1875-1923.

RUDOLF LOCHMATTER, the eldest surviving member of the well-known St. Niklaus family of guides, died on March 10, after an illness of a week only, at the comparatively early age of 48.

He obtained his certificate as a fully qualified guide when he was twenty-three years old, and it soon became evident that a new star had arisen in the guiding world. By reason of the brilliant qualities which he displayed, he was rapidly making a great name when at the end of 1900 his career was suddenly cut short by an unfortunate accident which deprived him of his left hand. He did not climb again until 1906, when he joined a Genevese friend, Monsieur Gouy, in a short season, and in 1907 he became second guide to Mr. Somers and myself, and accompanied us every season afterwards (excepting of course during the war).

The first names of English climbers which occur in his book are Mr. W. M. Baker (an old friend of his father) and Colonel Strutt, these being followed by those of Mr. Littledale, Mr. A. B. Thorold, and Mr. Austin Clover. With Mr. Thorold and Josef Pollinger he took part in a remarkable first ascent of the Grands Charmoz from the Mer de Glace, and with Mr. Clover he accomplished the first descent of the Weisshorn by the N. arête. In addition to these, he achieved many of the great climbs in various districts. From 1906 onwards he also did a considerable amount of climbing with Mr. Somers and myself and one or two Genevese gentlemen who were interested in him. He accompanied Mr. Winthrop Young as sole guide in a traverse of the Matterhorn, and in October last was chosen by Messrs. Charles and Edouard Gos as one of the guides on a remarkable traverse of the same peak, on which occasion a series of cinematograph pictures was taken. A few days later he took part with the same gentlemen in an attempt to ascend the Edelspitze (the St. Niklaus Gabelhorn), which was frustrated by bad weather.

Rudolf Lochmatter was a very handsome fellow (a fact of which he was singularly unconscious), rather under medium height, lightly built and slender. He was a first-rate snow- and ice-man, and in rock-climbing had probably no superiors, the ease and grace with which he climbed making his movements a constant delight to watch. After his accident he learned to make a clever use of his maimed arm, and his remarkable balance and sureness of foot made one forget that he had lost one of his hands. The best testimony of his powers which I can give is the fact that when I consulted old Christian Jossi on the question of Rudolf joining us as second guide, my old friend merely remarked that he would prefer him to most guides with two hands.

Of his personal character I cannot speak too highly. The mishap which deprived him of a hand would have soured the dispositions

of many guides of his calibre, but although it saddened such a keen lover of climbing as he was, Rudolf met his misfortune with the greatest fortitude, and when he learned that he was to join us as second guide, his intense satisfaction was a joy to witness. His extraordinary thoughtfulness, unselfishness, modesty and intelligence made him the most delightful companion imaginable. In short, he was one of nature's noblemen, and more than that I cannot say.

SYDNEY SPENCER.

THE ALPINE CLUB LIBRARY.

The following additions have been made to the Library:—

Club Publications.

Akad. Alpen-Ver. Berlin. 29. Jahresh. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 20: plates. 1922

First ascents, 1922:—*J. Heidenhain*, alone, Zwölfer N.-Grat: *G. Künne*, Graftalsp. Roter Schragen fr E. Ruiskogel: *P. Borchers*, Aig. de Toule d. N.W. arête.

Blgarski Tyrist. Vol. 15, nos. 1-2. 12×9 : pp. 32: ill. Sept., Oct. 1922
No. 1 contains Mlle d'Angeville's ascent of Mont Blanc.

C.A.F. La Montagne. Rev. mensuelle. 18e année. 9×6 : pp. xvi, 272: ill. 1922

Among the articles are:—*J. de Lépiney*, Premières ascensions dans la région du Col de Blaitière (first ascent Aug. 12, 1920: *J. de Lépiney* and *P. Chevalier*, attempt and ascent of the Aiguille): *F. Oblat* and *J. A. Morin*, Ascensions d'hiver en Corse (Cinque Fratri, N. and S.; Mte Cinto; Clochetons de Calasima): *J. Arlaud*, Aux Pyrénées désertes: *H. Vallot*, La crête du Mont Joly au Col du Bonhomme: *E. Gaillard*, Les noms des heures dans la toponymie alpine (e.g. Neuner Kofel, Elfer Kofel, Eisner Kofel; Cima Dievi, Dodici; du Midi; Bec de None, de Mezzodi; Aig. de Tierce): *J. Vallot*, Thirty-fourth and last ascent of Mont Blanc, 1920: *J. Capedon* and *J. Escarra*, Itinéraires de l'Aiguille Doran: *H. Noirel*, Levés à gde échelle dans la région d. Alpes: *J. Blanchet*, Autour du Pic du Midi d'Ossau: *P. Dalloz*, *J.* and *T. de Lépiney*, Aig. du Peigne N.W. and W. arête: *M. A. Verney*, Face N.W. du Gr. Marchet, first descent 1921: *R. Richard*, Les Dents de Lanfon (with Bibliography of first ascents).

Among new ascents are:—*L.* and *H. Bordeaux*, Tête de la Ciolaz, N. arête: *B. Leclercq* and *J. Savard*, Pte de Thorens S. and W. arêtes: *P. Guiton*, Pic d'Olan by N.W. face: *J. P. Loustalot* and *L. Zwingelstein*, Pierra Menta, 1922: *M. Lughinbuhl* and *L. Zwingelstein*, Mont Aiguille S.W. face.

— Annuaire de poche. Guide et Porteurs. Chalets et Refuges. $7 \times 4\frac{1}{2}$: pp. 64. 1922

— Canigou. Bulletin. $8\frac{3}{4} \times 5\frac{1}{2}$: pp. 151. 1894

— Notice sur les excursions les plus intéressantes des Pyrénées-orientales. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 24. 1904

C.A.I. Rivista. Vol. 41. 10×7 : pp. 258: ill. 1922

Among the articles:—*A. Corti*, Gruppo d. Disgrazia: *A. Brian*, Laghetti dell'Alta Valsesia: *G. Gallina*, Mte Corno: *G. Cibrario*, Gruppo d. Limbara.

First Ascents, 1920-22:—*M. Strumia*, Becca di Monciair N. face: *R. Negri*, Fünffingersp.: Anulare S. face: *M. Baratonio*, etc., Aig. Verte ouest de Valsorey descent E., guideless: Becca di Nona N. face, guideless: *U. Balestreri*, Pierre Menue S. face: *A. Frisoni*, P. d. Saette, 1917, N. arête: tr Forcella Plent: *A. Bonacossa*, Mt. Dolent S.W. face: *G. A. De Petro*, M. Faroma S.W. arête, Denti di Vessona, M. Pisonet fr S., Becca del Merlo

- S.-S.W. arête : *L. Zacchi*, Sass Sougher E.N.E. face, guideless ; Mte Schiara S. face : *A. Frisoni*, etc., Mt. Vêlan S.E. face : *A. and C. Calegari*, etc., Pizzaccio ; Pizzo Mater : *F. Chabod*, Dent d'Hérens S. arête : *E. Janetta*, etc., Corno Grande Vetta orient N.E. face ; Corno Piccolo E. face.
- C.A.I. Bassano.** A ricordo della inaugurazione della Sezione. 9 × 5½ : pp. 7. 1922
- **Bergamo.** Boll. mensile. Anno 3. 9½ × 6½ : pp. 144 : ill. 1922
In no. 10, first ascent Pte di Aga Merid. by W. face (*I. Luschinger*, *B. Sala*, *F. Perolari*) 1922 is described : also first ascents in Torretta group by the same : in no. 12 by the same, first ascent Pizzo di Coca by *E.*
- **Bolzano.** Rivista dell'Alto Adige e Bollettino mensile della Sezione. Anno 1, No. 21-22. 12 × 9 : pp. 12 : ill. Nov. 1922
Contains :—*F. Terschak*, La parete sud della Marmolada.
- **Sez. Fiorentina.** Bollettino. 9½ × 6½ : pp. 120 : ill. 1922
Among the articles are :—*R. Soria*, Prima traversata in sci del Mte Cimone : *T. Provasi*, Ranunculus glacialis : *F. Pontecorvo*, Parete N.E. d. Roccandagia, prima ascensione : *T. Provasi*, Saussure.
- **Gorizia.** Bollettino bimestrale. Anno 1, no. 1-5. 9 × 6½ : pp. 50 : 2 photographs, Mte Mangart, Mte Ialouz. Apr.-Nov. 1922.
- **Milano.** Grande escursione alpina nazionale all'Etna. 9½ × 6½ : pp. 14 : ill. 1922
- Atlas of 32 plates.
- Comunicato Mensile. Anni 1-3. 10 × 7 : ill. 1920-22
First ascents described, 1920 :—*A. Bertoli*, Pta S. Anna, W. arête fr Pte Torelli : *P. Marimonti*, Fünffingersp. S.W. face, Forcella d. Pollice. 1921 :—*A. and L. Boni*, 2da ascen. Guglis Miazza : *A. Calegari*, Mte Zebbru by *E.* : *L. Boni*, Corno Maggiore di Nefelgiu S.W. arête : *A. Balabio*, *A. Calegari*, Pizzo Zerna ; Mte Masoni N. face ; Cima Scoltador W. face, S.S.E. arête ; Mte Aga by N.E. ; Pta di Paddavista : *L. Polvara* and *V. Ponti*, Pta Rasica N. arête fr Colle Lurani. 1922 :—*P. Marimonti*, Camp. Basso d. Lastei di Focobon ; Cima di Zopel N.E. face.
In 2, no. 7 : notes on huts from Mte Rosa to Alto Adige.
- **Soc. degli Alpinisti tridentini.** Bollettino. Anni 12-13. 9 × 6 : pp. 150 : 140 : ill. 1921-22
Among the articles are :—*G. Pederotti*, Le strade militari d. regione trentina ; La parete nord del Mte Agner : *V. E. Fabbro*, Ascensione d. Campanile di Val Montanaia (ill.) : *F. Terschak*, La parete est d. Cima piccola di Lavaredo (ill.) : *G. A. Sperti*, Ascensione del 'Campanile Rosa' (ill.) : *M. Manfroni* and *Ottone Brentari*, I. salita d. parete sud-est d. Cima Pordoi, 1922.
- Nel suo cinquantenario 1872-1922. 11½ × 9 : pp. 194 : col. and other plates. 1922
This contains :—*G. Marzini*, La Società : *V. Stenico*, Rifugi alpini : *G. Lorenzoni*, Missione dell'alpinismo : *I. Lunelli*, La schiera del Susatini : *V. Stenico*, Le guida : *G. B. Trener*, Cesare Battisti : *M. Scotoni*, La Società e la guerra : *R. Flaim*, La S.O.S.A.T. : *A. Rossaro*, Cimiteri di guerra : *E. Quaresima*, I montanari d. Trentino : *G. Pederotti*, Le pubblicazioni sociali d. S.A.T.
- **Sucaì.** Dispense. 11½ × 9. 1922
No. 1.—Alto Adige, Dolomite di Sesto, Regione Popena.
No. 3.—Regione Tofane-Pomagagnon, Popena.
- La tenda. 6½ × 4½ : pp. 22 : ill. 1922
- Che cosa è la Sucaì ? 6½ × 4½ : pp. 30. 1921
- **Sez. Valtellinese, Sondrio.** Ricordo del Primo Cinquaterario dalla fondazione 1872-1922. 7 × 4½ : pp. 22 : maps, plates. 1922
- Cairngorm Club.** Journal, vol. 10, nos. 55-60. 9 × 5½ : pp. 279 : ill. 1920-22
Among the articles :—*A. M. M. Williamson*, Scaling the Coolin Peaks : *J. H. Bell*, From Garbhchoire to Glencoe : *J. A. Hadden*, The Lairig Dhru

in calm : *J. McCoss*, Climbing Notes (on knots, etc.) : *J. R. Levack*, Rock-climbing on Clochnaben : *A. M. M. Williamson*, Climbing in Skye in Wet Weather : *R. Clarke*, Midwinter in Lairig Dhru : *J. McCoss*, Barns of Bynac in a Day : *D. P. Levack*, Ben More Assynt.

Cairngorm Club. Rules. $6\frac{1}{2} \times 4\frac{1}{2}$: pp. 11. 1921

D. u. Oe. A.-V. Donauland. Nachrichten. Nr. 1-20. $12\frac{1}{2} \times 9\frac{1}{2}$.

Aug. 1921-März. 1923

— — — Bestandverzeichnis der Bücherei : occurs in no. 7 of above.

Among articles are :—*L. Patéra*, Der Weisseckkamm in der Radstädter Tauernkette : *H. Kaufmann*, Bergfahrten in d. Carnischen Voralpen : *O. Margulies*, Nebelfahrten im Cromertal, Cromertalsp., Kl. Seehorn, Kl. Litzner : *O. Gerhardt*, Grandes Jorasses.

Fell and Rock Climbing Club. Journal, vol. 6, no. 1. $8\frac{1}{4} \times 5\frac{1}{2}$: pp. 123 : plates. 1922

Among the articles are :—*G. S. Bower*, Doe Crags and Climbs around Coniston (plates and routes marked) : *C. F. Holland*, The Dolomites : *G. A. Solly*, The Pendlebury Traverse : *R. J. Porter*, The Puig Mayor, Majorca : *H. G. Willink*, Pillar Rock, 1877.

First ascents :—*F. Graham*, Lower Kern Knotts, West Climb : *D. G. Murray*, Coniston Doe Crags 'B' Buttress, 1822 : *W. T. Elmslie*, Bowfell Buttress Flat Crags : *H. S. Gross*, etc., Gillercombe Buttress, Borrowdale, 1922.

Foren. til Ski-idraettens fremme. Aarbok. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 183 : plates. 1922

Among the articles is :—*F. Huitfeldt*, Skibinding, en historik og en kritik.

Karpathen-Verein (1918, formerly Ungar. karpathen-Verein) Turistik und Alpinismus. 1-3. Jahrgänge. $9\frac{1}{2} \times 6\frac{1}{2}$. 1918-22

Among the contents are the following, 1918 :—*R. v. Komarnicki*, Die Tatra : *F. Hefty*, Aus. d. Vogelschau : *O. Friedmann*, Der Satan : *M. v. Jankovics*, Tofana di Rocces : *O. Friedmann*, Spitze Turm : *G. v. Scholtz*, Lomniczersp. 1921 :—*A. Grosz*, Auf höchster Zinne : *K. Zobek*, Der Klettergarten der Pollauer Berge : *M. Schein*, Koncistatürme : *J. Györfly*, Pflanzenwelt d. Hohen Tatra : Tödliche Bergunfälle in d. Hohen Tatra 1888-1921. 1922 :—*E. Scheure*, Kleinsattelpass im Winter : Hüttenbauten in d. Hohen Tatra : *D. Reichart*, Bergbesteigungen in d. Hohen Tatra.

New ascents :—*O. Friedmann*, Krivan N.W.-Wand 1916 : *A. Grosz*, Satan O.-Wand 1920 : *Z. Klemensiewicz*, Dénessp. N.-Wand 1910 : *G. A. Hefty*, Tatrasp. S.W.-Grat 1915 : *A. Grosz*, Gerlsdorfersp. W.-Wand 1920 : *L. Langos*, Westersp. S.W. 1917 : *A. Grosz*, Gant W.-Wand, 1910 : *G. v. Komarnicki*, Gemsensp. O.-Grat.

New Winter Ascents :—*F. Förster*, Sparaj. 1916 : *W. Delmar*, Rovinkischarte 1916 : *G. v. Komarnicki*, Schwarzerturm 1916.

Ladies' Alpine Club. Members, Expeditions, etc. 5×4 : pp. 27. 1923

Midland Association of Mountaineers. Accounts, report, books, etc., for 1922. 13×8 : 6 pp. typed. 1923

Mountain Club of South Africa. Annual, no. 25. $9\frac{1}{4} \times 6$: pp. 146 : plates. 1922

Among the articles are :—*J. W. F.*, Jan Dutoit's Kloof : *F. Berrisford*, Groot Hoek Kloof and Peaks : *J. Cooke*, M'thlapetsi : *M. E. Smuts*, Coastal Mountain Ranges between Mossel Bay and Port Elizabeth : *K. Cameron*, Cedar Mountains of Clanwilliam : *Mrs. B. P. Clark*, Dauphiné Alps and Mt. Pelvoux.

The Mountaineer. Prospectus number. Mount Garibaldi Natural Park, B.C. Seventeenth Annual Outing, July 28-August 12, 1923. 10×7 : pp. 11 : ill. 1923

The Mountaineers. Vol. 15, no. 1. $11 \times 7\frac{1}{2}$: pp. 108 : ill. Dec. 1922

Mount Adams, Mount St. Helens and the Goat Rocks.

Niederländische Alpen-Vereeniging. Statuten. 9×6 : pp. 4. 1903

Oesterreichische Alpenzeitung. Nr. 997-1008. $10\frac{1}{2} \times 7\frac{1}{2}$: pp. 244. 1922

Among the articles :—*K. Prusik*, N.W.-Grat d. Plansp. : *M. Grosse*, W.-Grat d. Verpeilsp. : *P. Reuschel*, Aig. du Chardonnet : *R. Szalay*, N.-Grat

d. Gr. Venedigers: *A. Rössel*, Alphubel: *A. Deye*, Scharwänden: *F. Herdlicka*, Hochgotling N.-Wand: *F. Horn*, Auf die Hochalmisp.

First ascents:—*M. Pauli*, Säulenkopf O.-Wand 1920: *S. Walcher*, Stierlochkopf W.-Grat 1920: *S. Holztrattner*, Vord. Kammerlingh. N.O.-Wand 1920: *S. Walcher*, Verhupsp. S.W.-Wand 1920: *A. Roessel*, Möhrnerschneidsp. aus d. Floite 1920: *S. Walcher*, Collaz N.W.-Wand 1917: *R. Damberger*, Gr. Pyhrgas N.-Grat 1921: *K. Prusik*, Gr. Bischofsmütze N.-Wand 1921: *R. Hamburger*, Böse Mauer S.-Grat 1920: *A. Roessel*, Östl. Faselfadsp. S.S.O.-Wand 1920: *H. Kies*, Vord. Ölgrubensp. N.O.-Grat 1921; Watzersp. N.-S. 1921: *H. Netsch*, Rofelewand W.-Wand 1919: *R. Szalay*, Mittl. Fluchth. W.-Wand 1921; Patteriol N.W.: Pfeiler 1921: *A. Horeschowsky*, Kabling S.-Grat 1922: *F. Kolb*, Gr. Ödstein 1921: Hochtor ü. d. Steinkargrat 1921: *H. Püchler*, Bärnkarmauer N.-Grat 1921: *F. Rigele*, Schönfeldsp. O.-Wand 1921: *P. Huber*, Alhorn O.-Wand 1921: *F. Rigele*, Sommerstein S.W.-Wand 1921: *K. Winzig*, Hoher Nock N.O. Grat 1921: *K. Prusik*, Plansp. N.-Wand 1922: *R. Zeuner*, Plattenkopf v. N. 1921: *K. Baumgartner*, Fusstein N.W.-Wand 1921: *K. Sporrer*, Freiwand-Freiwandeck 1921.

Oxford and Cambridge Mountaineering. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 74: plates. 1922

The articles are:—*A. D. Godley*, Sub Rosa: *H. Mackintosh*, Rock Climbing in Skye: *L. A. Ellwood*, Courses Collectives: *H. R. C. Carr*, Concerning Gully Climbs: *T. G. Bonney*, Memories of a Geologist: *A. E. Storr*, Some Impressions of the Graians: *J. H. Wolfenden*, A Club meet in the Graians; Some Oxford Roofs, a Confession: *L. A. Ellwood*, Cambridge University Mountaineering Club: *J. H. Wolfenden*, Oxford University Mountaineering Club: *H. B.*, The Zmutt ridge.

Peñalara. Revista de alpinismo. Año 9. num. 97-108. $9 \times 6\frac{1}{2}$: pp. 266: ill. 1922

Among contents:—pp. 99-110, is the Indice alfabético de los cien primeros números: p. 122, a meeting of 13 Spanish Alpine Societies: pp. 112-21, Ascent of El Valeta, with illust.: pp. 128-9, First Spanish ascent of Aneto: pp. 157-61, Rules of Federación española de Alpinismo.

The Rucksack Club. Rules, Members, etc. $5 \times 3\frac{1}{2}$: pp. 22. 1923

S.A.C. Echo des alpes. 58e année. $9 \times 5\frac{1}{2}$: pp. 382: ill. 1922

Among the articles are:—*E. Gos*, L'arête de l'Argentine: *L. Spiro*, Les anglais dans les alpes: *C. P. Topali*, L'arête nord de la Pte de Salles: *G. A. Boret*, Les cordes alpines: *M. Morel*, Traversée du Lyskamm: *de Bouillé*, Tentative d'ascension à l'Aig. Verte en 1856 (reprint Journ. de Genève 27 April 1856): *J. Cooke Smith*, Ascensions et cols dans le groupe des Dents Blanches de Champéry: *O. Thiel*, Traversée de la Südlenzsp. par le mauvais temps: *A. Morand*, tr Le Grépon-Les Drus; Chanrion-Zermatt: *H. R. C. Carr*, l'Alpinisme en Gr. Bretagne: *A. Truan*, tr Grand-Combin Valsorey-Panossière.

First ascents:—*A. Martin*, Cime de l'Est, S. face: *E. R. Blanchet*, Cimono di Campo secco E. arête: *C. Koella*, 1874, tr Col de la Dent Jaune: Dent de Bonabeau by N.

— **Alpina.** 30. Jahrg. $10 \times 7\frac{1}{2}$: pp. 334: ill. 1922

Among the articles are:—*W. v. Bergen*, Durchs Lohrergebiet: *T. Reichstein*, Glärnisch N.-Wand: *G. Euringer*, Oetler-Gruppe: *O. Hug*, Am Doldenhorn: *R. v. Tscharnner*, Im Mont Blanc Massiv, 1921: *H. Müller*, l'Aig. Jos Croux: *P. Montandon*: Topographie d. Bietschhorngebietes: *P. v. Schumacher*, Ueberschreitung d. Meije: *H. Lauper*, Bietschhorn-Südwand: *A. Graber*, Sonlig Wichel u. Wichelschyn: *G. Thoma*, Quellgebiet d. Dora Baltea.

New ascents, 1921:—*S. Schmid*, Hockenh. fr S.: *P. Schmidt*, etc., Ulrichsp. W. face: *P. E. G. Tonella*, Breitstock, Zapporthgrat, Zapporth.: *G. and B. Gugliermima*, M. Blanc, Innominata arête; Col Maudit fr Rifugio Torino: *J. Favard*, tr. Col d. Nantillous fr Gl. d'Envers de Blaitière: *M. Schwartz*, Pigne d'Arolla E. arête of N. face: *E. R. Blanchet*, Stecknadelp. var. S.E. face; Plath. desc. N.E. arête, alone; Inner Rothorn W. arête; Saaser

- Trifhorn by E.: Kanzelti, E. face, S. arête: Nollenh. N.E. arête: P. Borchers and P. Reuschel, Spalihorn W. and N.: M. Liniger, Fründenh. W. arête; Grosshorn N.W. arête; Mönch N. face: E. W. Burger, Galenstock E. face: R. Winterhalter, Wichelh. S. pk.: O. K. Hug, Claridenstock N. face: F. Zwicky, Bocktschengel fr W. and tr: N. S. Finzi, Piz Bacone S. arête: H. Fret, Piz Pisoc E. arête: E. Gretschnann, Sulzfluh. S. face.
- S.A.C. Führer** d. Walliser Alpen. Bd. 2. Vom Col de Collon bis zum Teodulpass. $6\frac{1}{2} \times 4$: pp. 380: ill. Zürich, Rascher, 1921
- **Clubführer** durch die Graubündner-Alpen, 6×4 . Schuler, Chur. Bd. 2. Bündner Oberland u. Rhein walldgebiet, pp. 332, ill. 1918
- Bd. 3. Calanca, Misox, Avers; pp. 248: ill. 1921
- Bd. 4. Südl. Bergellerberge u. Mte Disgrazia; pp. 182, ill. 1922
- **M. Kurz**. Guide d. Alpes valaisannes, vol. 4. Du Col du Simplon au Col de la Furka. $6\frac{1}{2} \times 4$: pp. xxvii, 242: ill. 1920
- Katalog der Zentralstelle f. alpine Projektionsbilder. $8 \times 5\frac{1}{2}$: Bern. 1, 1915: 2, 1918: 3, 1911: 4, 1917: pp. 40, 40, 55, 54.
- **Basel**. Jahresbericht für 1922. Beilage, Streifereien in d. Gebirgen des Oberhasli, 1848 u. 1859, v. Joh. Rud. Schaub. $9 \times 6\frac{1}{2}$: pp. 71: 2 plates. 1923
- The Beilage contains the following printed from Schaub's MS.:—His ascent, the first of the Nördl. Gelmerlimmi: alone, the second ascent of the Ritzlihorn by the W. face and the N.W. arête: both in 1848. Also his ascent, the first, of the Maasplankstock fr the W. by the Trift glacier in 1859. A portrait of Schaub is given.
- **Chaux-de-Fonds**. Bulletin annuel no 31. $7\frac{3}{4} \times 5$: pp. 119: plate. 1923
- This contains:—*L. S.*, Au Wildstrubel: *B. Hofmänner*, Parc national suisse: *G. G.*, Everest
- **Diablerets**. Les 40 premières années. Notice historique par E. Busset. $7\frac{3}{4} \times 5$: pp. 98: plates. Lausanne, Imprim. réunies 1913
- **Prättigau**. Theoretical and practical course of instruction in mountaineering for beginners and advanced climbers, 25 July to 4 August 1923. Prospectus
- This includes instruction in outfit, first aid, maps, use of rope in practice on rock and ice.
- **Sections romandes**. Chansonnier. 3me édition. $6\frac{1}{2} \times 4\frac{1}{2}$: pp. 88. Lausanne, Duvoisin 1909
- Sci Club Valtournanche**. Valtournanche. $6\frac{3}{4} \times 4\frac{1}{2}$: pp. 35: plates. 1922
- One plate is portraits of J. and P. Macquinez, J. A. Carrel, J. B. Bich.
- Soc. Escurs. Milanesi**. Le Prealpi, anno 21. $9\frac{3}{4} \times 6\frac{3}{4}$: pp. 250: ill. 1922
- The articles are chiefly on climbs in the Dolomites. In the Oct. no. is a reproduction of an unusual print of Saussure on Mt. Blanc in 1787—the origin of the print not given.
- Svenska Turistfören. Årsskrift**. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 398: plates. 1923
- Among other articles, this contains:—*H. N. Pallin*, Till Sarektjakkos Sydtopp: *C. T. Mörner*, Kebnekaise-besigtning via Ostra vägen.
- Atlas över Sverige. Del. 1.
- Ungar. Karpathen-Verein**. Jahrbücher 43 u. 44. 9×6 : 151: 114. 1916, 1917
- Those are the last numbers published. In 1918 the Club became the Karpathenverein and issued a monthly paper, Turistik und Alpinismus, q.v.
- Among the articles are:—*A. Grosz*, Lawinenverhältnisse in d. Hohen Tatra: Auf dem Grat zwischen d. Kohlbahtälern: Erste Durchkletterung d. Südwand d. Markasitturmes.
- Yorkshire Ramblers' Club**. Annual Report, etc. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 17. 1921–2
- Journal, vol. 5, no. 13. 9×6 : pp. 30: plates. 1922
- Contents:—*C. D. Frankland*, Novel tactics on central buttress Scawfell: *E. E. Roberts*, Mountain ramparts of Saas: *A. Bonner*, Swildon's Hole and the Mendips: *E. E. Roberts*: Gaping Ghyll by the main shaft; Goyden Pot, Nidderdale.

New Works.

- Aeppli, Aug.** Geographische Bibliographie der Schweiz für das Jahr 1919. SA Mitt. Geogr.-Ethnogr. Ges. Zürich Bd. 20. 9 × 6: pp. 75-101. 1920
— für die Jahre 1919-21. In same, Bd. 21. 9 × 6: pp. 60-89. 1922
- Allix, André.** Nivation et sols polygonaux dans les alpes françaises. In La Géographie, Paris, t. 39, no. 4. 10 × 6½: pp. 431-8: ill. Avril 1923
- Alpine Sport Gazette.** Weekly. No. 1. 9½ × 7½: pp. 22: ill. Dec. 4, 1922
- Austria.** A journey through a picturesque country. 9½ × 6½: pp. 78: maps, plates. Vienna (1922)
- Backhouse, Edward.** In memoriam. In The Friend, vol. 62, no. 37: portrait. London, Sept. 15, 1922
- Baker, Ernest A.** The highlands with rope and rucksack. 8½ × 5½: pp. 258: plates. London, Witherby, 1923. 12/6
- Baud-Bovy, D.** Première ascension 1919 du plus haut sommet de l'Olympe. In La Géographie, Paris, t. 39, no. 1. 10 × 6½: pp. 89-90. Janvier 1922
- Beut, Allen H.** Desert colours and mountain heights. In Bull. Geogr. Soc. Philad. vol. 20, no. 4. 10 × 6½: pp. 142-146. Oct. 1922
- On some Californian mountains.
- de Bissy, Commandant.** Le Col de Saint-Michel vrai passage des Romains à travers la Montagne d'Aiguebelette. 8 × 5½: pp. 47: maps. Chambéry, Imprim. réunies 1921
- This contains interesting quotations from travellers' works from 1518 onwards.
- Blodig, Karl.** Die Buingruppe. In Deutsche Alpenz. Jahrg. 18. hft 9. 12 × 9: pp. 195-9: ill. 1922
- Boccardi, Renzo.** I verdi. Cinquant'anni di storia alpina, 1872-1922. 9½ × 6½: pp. 134: ill. Roma, Alfieri & Lacroix (1922)
- An interesting military work, largely devoted to the mountain campaign of the last war. Contains also the songs of the Alpini.
- British Ski Year-Book**, vol. 1, no. 3. 9 × 5½: pp. 499: plates. 1922
- Among other articles this contains:—*N. E. Odell*, Ski-ing and sledging in Spitsbergen: *H. de Watteville*, A Winter in Tirol: *E. C. Pery*, Oberland traverse in May: *B. Binyon*, Accident on Piz Muraigl (L. M. Keep killed, Jan. 1922).
- Brunies, S.** Naturschutzbestreben in alter und neuer Zeit. Schweiz. Jugendbücherei f. Naturschutz. 8 × 5: pp. 44. Basel, Schwabe (c. 1922).
- A travers le Parc National Suisse. Guide pour les jeunes gens. 8 × 5: pp. 64: ill. (c. 1922)
- Gite attraverso il Parc. pp. 64: ill.
- Cuorsas tras il Parc. pp. 54: ill.
- Excursiuns tres il Parc. pp. 57: ill.
- Il Parc nazional sün terra ladina. pp. 48: ill.
- Bibliothèque de la jeunesse suisse pour la protection de la nature.
- The above are some of the numerous publications of the Swiss Society for protection of nature, issued for young people, which has its office in Bâle.
- Bryce, Viscount.** Memories of travel. 8½ × 5½: pp. xii, 300. London, Macmillan, 1923
- Contents:—Iceland, 1872: Tatra, 1878: Suvaroff's alpine campaign: N. America, 1921: Altai, 1913.
- Calzada, J. Fresneda de la.** Qué es la Montaña? Santander, Libr. moderna (1922)
- de Cardonne, Pierre.** Le Retour Eternel. 6½ × 5: pp. 147. Chambéry, Dardel (1922)
- A novel in the Alpine parts of Savoy.
- Coolidge, W. A. B.** My Alpine Scrapbook. 31, The Valley of Avers.
- 32, Position and names of the Cima di Jazzi.
- 33, Names of the Weissshorn.
- 36, Half a week in the Rhätikon.
- 37, The History of the Eggishorn up to 1856.
- The above are in Engl. Herald Abroad.

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- Davis, John W.** The unguarded boundary, United States. In Geogr. Rev., New York, vol. 12, no. 4. 10 × 7: pp. 585-91: plates. Oct. 1922
- Deutsche Alpenzeitung.** Jahrg. 18. 12 × 9: pp. 287: ill. 1922
Among the articles are:—*Fuhkoh Maki*, I. Best d. Eigers ü. d. Mittellegigrat: *W. Lehner*, Um die Guglia di Brenta: *E. Hofmann*, Im Parzinn: *R. Liefmann*, Überschreitung d. Weissorns: *K. Blodig*, Buin gruppe: *O. Zinniker*, Allein aufs Lauteraarhorn: *H. Kees*, Aus d. Kaunergrat.
- Dreyer, A.** Lsg. v. Bergsteigerbrevier. Eine Blütenlese aus den Werken Alpinen Dichtkunst und Erfahrungsweisheit. 7 × 4½: pp. 156, plates. M. 500. München, Parcus (1922)
- Kleiner Ratgeber für die neuere alpine Literatur. Veröffentl. Ver. Freunde d. A. V.-Bücherei I. M. 230. München, Parcus (1923)
- Eschmann, Ernst.** Gian Caprez. Eine Geschichte aus dem Engadin. 8 × 5½: pp. 261: ill. Zürich, Orell Füssli, 1923
- Mount Everest, Climbing.** Kinematograph lecture. 10 × 7½: pp. 12: ill. London, 1922
- Mount Everest Expedition of 1922.** In Geogr. Journ., London, vol. 60, no. 60. 9½ × 6: pp. 385-424: maps, plates. December 1922
Contains:—*C. G. Bruce*, Darjeeling to Rongbuk Glacier base camp: *E. L. Strutt*, East Rongbuk Glacier: *G. L. Mallory*, First High Climb: *G. I. Finch*, Second High Climb. Everest photographs.
- Expédition, 1922. Séance 15 déc. 1922. In La Géographie, Paris, t. 39, no. 1. 10 × 6½: pp. 90-93. Janvier 1923
- Ferrand, H.** Cabanes, Refuges et Chalets dans les Alpes du Dauphiné et de la Savoie. 8½ × 5½: pp. 30. Paris, Expansion scient. française, 1921
- La Vallée d'Aoste dans la Cartographie ancienne. Ex. Augusta Praetoria, nos. 6-8. 9½ × 6½: pp. 13: plates of maps. 1922
- Finch, G. I.** Equipment for high altitude climbing, with special reference to climbing Mount Everest. In Geogr. Journ., London, vol. 61, no. 3. 9½ × 6: pp. 194-207. March 1923
- Flaig, Walther.** Im Kampf um Tschomo-lungma den Gipfel der Erde. Der Himalaya und sein höchster Gipfel Mount Everest. 8 × 5½: pp. 76: ill. Stuttgart, Franck (1923)
- Burgen an der Grenze. In Deutsche Alpenz. Jahrg. 18, Heft 9. 12 × 9: pp. 203-13: plates. 1922
- Frazer, R. A.** Topographical work of the Oxford University Expedition to Spitsbergen. In Geogr. Jour., vol. 6, no. 5. 9½ × 6½: pp. 321-36: plates. Nov. 1922
- Freshfield, Douglas W.** Below the snow line. 8½ × 5½: pp. vii, 270: maps. London, etc., Constable (1923). 18/-
Contents:—Maritime Alps: Midsummer in Corsica: Pania della Croce, Gran sasso d'Italia: Classical Climbs: Dinaric Alps: Kabyle Highlands, Behind the Bernina, Bergamasque Alps, By-Corners in Savoy, By-ways in Japan, Mountains of the Moon.
- The articles, except one, are altered reprints from the 'A.J.'
- Frödin, John.** Voyage d'études géographiques dans le Maroc occidental. In La Géographie, Paris, t. 39, no. 2. 10 × 6½: pp. 180-190: ill. 1923
- Geographical Journal.** Vol. 60. 9½ × 6: pp. viii, 563: maps, plates. July-December 1922
- A. F. R. Wollaston*, Natural history of S.E. Tibet; Mount Everest Expedition, 1922: *A. M. Heron*, Rocks of Mt. Everest; Photographs of Mt. Everest: *H. L. Shuttleworth*, Border countries of Punjab Himalayas.
- Gex, F.** Les avalanches du rebord subalpin de la Combe de Savoie. In La Géographie, Paris, t. 39, no. 1-2. 10 × 6½: pp. 36-52, 165-180: ill. Janvier-Février 1923
- Gillmann, C.** An ascent of Kilimanjaro. In Geogr. Journ., vol. 61, no. 1. 9½ × 6: pp. 1-27: illustrations and map. January 1923
- An ascent in Oct. 1921, by C. Dundas, P. Mason, F. J. Miller, and C. Gillmann.

- Girardin, P.** Henri Vallot. In Memoriam. In *La Géographie*, Paris, t. 39, no. 2. 10 × 6½: pp. 231-6. Février 1923
- Godefroy, R.** Sous la tiare. L'alpiniste Achille Ratti. Reprint on large paper from *Rev. Alp.* no. 2. 10 × 6½: pp. 11. 1922
- Graubünden.** Winter in Graubünden. 6½ × 4½: pp. 33: ill. Davos 1922
- Summer in Graubünden. 6½ × 4½: pp. 29: ill. 1920
- Gregory, J. W. and C. J.** The alps of Chinese Tibet and their geographical relations. In *Geogr. Journ.*, London, vol. 61, no. 3. 9½ × 6: pp. 153-179. March 1923
- Hall, Rich. Watson.** Some Cumbrian climbs and equipment. 7¼ × 4½: pp. 35. Cockermouth, 1923
- Kindly presented by the author.
- Hammer, Wm.** Geologischer Führer durch die Westtiroler Zentralalpen. Geolog. Führer 22. 6 × 4: pp. viii, 150: ill. Berlin, Borntraeegger, 1922
- Hedin, Sven.** Southern Tibet. 11 × 8½: plates: numerous maps and atlas separate. Stockholm General Staff, 1922
- Vol. 4: Karakorum and Chang-Tang, pp. xii, 428.
- Vol. 6: N. Ekholm, Meteorolog. Beobachtungen.
- : Atlas, 2 vols., folio.
- Vol. 7: History of Exploration in the Karakorum Mountains, pp. xii, 605.
- Vol. 8: The Ts'ung-Ling Mountain, by Sven Hedin and Albert Herrmann.
- Die Westländer in d. chinesischen Kartographie: v. Alb. Herrmann. Zwei osttürkische MS.-Karten: v. Alb. Herrmann. Chines. Umschreibungen v. älteren geogr. Namen: v. A. Herrmann. pp. xvi, 456.
- Vol. 9: Journeys in eastern Pamir, S. Hedin: Osttürk. Namenliste, A. v. Lecoq: Journeys v. Ost-Pamir v. Bron Asklund: Eine chines. Beschreibung v. Tibet: Das Goldstrom v. Erich Hämisch: General Index.
- Heim, Albert.** Geolog. Nachlese. Nr. 27. Über die Gipfelflur der Alpen. Ex Vierteljahrs. Naturf. Ger. Zürich. Bd. 67. 9½ × 6½: pp. 45-66. 1922
- Pro Helvetia.** Swiss national review for travel and sport. Winter and spring season 1922-3. 12 × 9½: pp. 32: ill. Berne, Hallwag, 1922
- Hirst, John:** Collected and edited by, for the Rucksack Club. The songs of the mountaineers. 7 × 5: pp. 124. Manchester, Corner (1922). 3/6
- Many of the songs can be had separately with music, 2/- each.
- Holtdahl, Olaf.** Novaya Zemlya. In *Geogr. Rev.* New York, vol. 12, no. 4. 10 × 7: pp. 521-31: plates. Oct. 1922
- Hotels.** Official guide to Swiss Hotels. 1921
- Howard-Bury, C. K.** A la conquête du Mont-Everest. Traduction par G. Moreau. Préface du Prince Roland Bonaparte. 9 × 5½: pp. 415: map, plates. Paris, Payot, 1923
- Presented by the translator.
- Inaka,** or reminiscences of Rokkosen and other rocks. Collected and compiled by the Bell Goat. 16 vols. 9 × 6½: numerous ill. Kobe, 1915-22
- These were very kindly presented to the Library by the editor, Mr. H. E. Daunt.
- India.** Records of the Survey of India, vol. 15. Annual reports of parties and offices 1919-20. 13 × 8. Dehra Dun, 1921
- This contains pp. 107-113, map, plates: H. R. Morshead, Report of the Expedition to Kamet, 1920.
- The first attempt was in June 1855, by Schlagintweits, prob. E. Ibi Gamin; then I. S. Pocock in 1875 reached 22,040 ft.: reconnoitred in 1907 by C. G. Bruce, T. G. Longstaff, A. L. Mumm: attempts in 1910, 1912, 1913 by C. F. Meade; attempt twice by A. Slingsby: reconnoitred in 1911 by A. M. Kellas; and Major Morshead's and A. M. Kellas' attempt in 1914, reaching Meade's Col.
- The work also contains pp. 115-118, map: K. Mason, Note on topography of Nun Kun.
- The heights given are:—Nun, 23,410; Kun, 23,250; Pinnacle Peak, 22,810; Snowy Peak, 19,830.

- Inge, W. R.** Outspoken essays. 2nd series. 1922
pp. 1-2: 'I began this essay on the terrace in front of an hotel at Mürren. A lonely holiday among the grandest scenes of nature is a favourable opportunity for setting one's ideas in order. . . . A Swiss alp, 5000 ft. above the sea, and in full view of a majestic range of snow peaks and glaciers, opens avenues of communication with the *magnalia Dei* which are less easy to maintain amid the dark and grimy surroundings of my London home.'
Compare with this Tagore's opposite experience quoted in 'A.J.' xxxii. 218-9.
- Jeffers, Le Roy.** The call of the mountains. Rambles among the mountains and canyons of the United States and Canada. $9\frac{1}{2} \times 6$: pp. xv, 282: plates.
New York, Dodd Mead, 1922
— Another edition. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. xv, 282: plates.
London, Fisher Unwin, 1923. 18/-
- Kara-koram.** Explorations in the eastern Kara-koram and the Upper Yarkand Valley. Narrative report (by Major H. Wood) of the Survey of India detachment with the De Filippi scientific expedition 1914. Published by order of the Government of India. $13 \times 8\frac{1}{2}$: pp. iii, 42: 'plates, map.
Dehra Dun, Trig.-Survey, 1922. 6/-
- On pp. 32-7 are short quotations from the works of various travellers from 1543 onwards.
- Kees, Hermann.** Aus dem Kaunergrat. In Deutsche Alpenz. Jahrg. 18, Hft. 10. 12×9 : pp. 225-32. 1922
- Lewin, W. H.** Climbing notes. In 'The Individualist.' $7\frac{1}{2} \times 5$: pp. 23-32. January 1923
- Lötschberg.** Bern-Lötschberg-Simplon. Bernese Alpine Railway. Chemin de fer des Alpes bernoises, Berner Alpen-Bahn. Illustrated guide. $7 \times 4\frac{1}{2}$: pp. 44: ill. Berne, Polygraphic Co. (1921)
- Chemin de fer d. Alpes bernoises. $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 56: ill. Berne, Bühler & Werder (1922)
- Berner Alpen-Bahn. $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 40: map, ill. Bern-Bümpliz, Benteli (1922)
- Machatschek, Fritz.** Morphologische Untersuchungen in den Salzburger Kalkalpen. Ostalpine Formenstudien hsg v. Dr. Fr. Leyden. Abt. 1, Hft. 4. $10 \times 6\frac{1}{2}$: pp. 304: ill. Berlin, Borntraeger, 1922. 15/-
- Manning, G. E.** Six weeks in Switzerland with some mountain ascents. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 17. Christchurch, N.Z., Christchurch Press (1922)
Ascents of Mt. Dolent, Dent du Midi, Matterhorn.
- Mason, Kenneth.** Routes in the Western Himalaya, Kashmīr, etc., with which are included Montgomerie's routes revised and re-arranged. Vol. 1, Pūnch, Kashmīr and Ladākh. Survey of India. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 295: maps. Dehra Dun, 1922. 12/-
- Methuen, A.** An alpine ABC and list of easy rock plants. $6 \times 3\frac{1}{2}$: pp. 35. London, Methuen (1922)
- Moriggl, Josef.** Von Hütte zu Hütte. Führer zu den Schutzhütten der Ostalpen. Bde. 1, 2, u. 3, unveränderte Aufl. 6×4 : pp. xii, 284: viii, 239. Leipzig, Hirscl, 1922
- Mumm, A. L.** The Alpine Club register 1857-63. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. vii, 391. London, Arnold, 1923
- Neame, P.** An alpine mirage. *Times*, May 11, 1923.

Mr. F. S. Smythe and I were climbing the Finsteraarhorn in the Bernese Oberland on May 2, a day of perfect weather and extremely good visibility. At an altitude of about 13,800 ft. we paused to admire the panorama of mountains. Suddenly at 11.55 A.M. the image of a ship appeared in the sky just to the east of the Eiger peak, floating in a blue shimmer just beyond the visible horizon. This lasted for a minute or so, and then vanished. Very soon after a line of five ships appeared further east, funnels and masts clearly distinguishable. This image lasted for some fifteen minutes, and varied in its clearness from time to time. The ships appeared, of course, greatly exaggerated in size, and were right way up, not inverted. The direction of the five ships was in a line from Finsteraarhorn through Grindelwald. This brings their position on the nearest sea to approximately the eastern exit of the English Channel into the North Sea, a distance of some 400 miles.

Both Mr. Smythe and myself saw the ships so clearly that we could not have mistaken any cloud effect for ships.

New Zealand. Tourist Resorts Department, Report 1922.

Little was done in the way of high climbing in 1921-2. The following ascents were made:—A. Graves, Miss J. A. Graves, Miss Thornton, Mt. Montgomery: Mr. A. and Miss J. Graves, Mt. Sealey: Miss Theomin, Mt. Derby, Monga Ma: Miss Theomin, C. Buchanan, Anzac Peaks: C. Buchanan, Footstool.

Odell, N. E. Geological notes from the Oxford expedition to Spitsbergen. In Geogr. Journ., London, vol. 60, no. 6. $9\frac{1}{2} \times 6$: pp. 424-26.

Oehninger, C. J. Die Alpenflora. 5. Aufl. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 41: 24 col. plates. December 1922
Münster, Westf., Selbstverlag, 1922

P.L.M. Railway and Sports. $8 \times 5\frac{1}{2}$: pp. 48: ill. 1923

Payer, Julius. Julius Payer's Bergfahrten. Erschliessungsfahrten in den Ortler-, Adamello- und Presanella-Alpen (1864-1868). Hsg. v. Wm. Lehner. $10\frac{1}{2} \times 7\frac{1}{2}$: pp. vii, 190: portr., plates. Regensburg, Manz, 1920
The ascents were in 1863-8. Some of the illustrations are from Payer's drawings. The expeditions include—1863, Gr. Glockner: 1864, Dosson di Genova, Corno Lagoscuro, Corno Bianco, Adamello, Presanella: 1865, Suldensp., Ortler, Königssp., Cevedalesp.: 1866, Tuckettsp., Schneeglocke, Mte. Zebbru, Cristallosp.: 1867, Corno Vioz, Cima Ganani, Rotsp., Pta Cadini, Mte Giumella, Mte Tresero: 1868, Pedersp., Zufallsp., Caré Alto, Mte Pisgana, Cima Ceren.

Pereira, George. Journey to Lhasa. In Geogr. Journ., London, vol. 61, no. 2. $9\frac{1}{2} \times 6$: pp. 124-130: sketch map. Feb. 1923

Perret, Robert. Notice sur la Carte au 20,000e de la Vallée de Sales et du Circle des Fonts (Alpes calcaires de Faucigny). $11\frac{1}{2} \times 9$: pp. viii, 83: map, plates. Paris, Barrere, 1922

— La topographie privée en France. In Le Correspondant, Paris: 94 année, no. 1443. $9\frac{3}{4} \times 6\frac{1}{2}$: pp. 436-462. 10 nov. 1922

Notes on Schrader, Viollet le Duc (Mont Blanc), Duhamel (Pelvoux), Kurz (Mont Blanc), H. Vallot (Mont Blanc), Helbronner (Alpes franç.), etc.

Pope Pius XI. Climbs on alpine peaks. By Abate Achille Ratti, mountaineer (now Pope Pius XI). Translated by J. E. C. Eaton. With a Foreword by Douglas Freshfield, and an Introduction by the Right Rev. L. C. Casartelli. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 136: portrait, plates.

London, Fisher Unwin (1923). 8/6

This contains translations of articles from the C.A.I. Bollettino and Rivista:—Across Mte Rosa, 1889: Matterhorn fr Zermatt, 1889: Mont Blanc by the Rocher, 1890.

— Achille Ratti. Ascensions. Mont Rose—Cervin—Mont Blanc. Traduit de l'Italien par Emile Gaillard. $8\frac{1}{2} \times 6\frac{1}{2}$: pp. 119: plates.

Chambéry, Dardel (1922)

This is no. 1 of 500 copies. Presented by M. Gaillard.

— His Holiness Pope Pius XI. A pen portrait by his Eminence Cardinal Gasquet, and the Pope as alpine climber. Translated from an article written by himself, with a portrait and 28 illustrations reprinted from the Review of Reviews. $9 \times 7\frac{1}{2}$: pp. 30: plates.

London, O'Connor, 1922. 7/6

This is no. 123 of 500 printed for sale.

Prescott, E. E. The Grampians, Victoria. $9\frac{1}{2} \times 7\frac{1}{2}$: pp. 2: 28 plates.

Melbourne, Whitcome, 1922

Rabot, C. Une expédition au plus haut sommet de la terre, Everest. In l'Illustration, Paris, no. 4104. 16×12 : pp. 395-406: map, plates.

29 oct. 1921

— L'Expédition de l'Everest. In l'Illustration, no. 4108. pp. 492-3: ill.

26 nov. 1921

Rocoffort, L. Le Secret de l'Avalanche. $7\frac{1}{2} \times 5$: pp. 119.

Pyin, Desvigne, 1922. Fr. 3.50

Roessel, Albin. Sportliches Bergsteigen mit 36 Abbildungen von Bruno Hess. $5\frac{1}{2} \times 3\frac{3}{4}$: pp. 95: ill.

Wien, Selbstverlag, 1922

Ruwenzori. The Tydsch. Kon. Nederl. Aardrijks. Gen., Sept. 1920 reports. W. Younger and Clifford Henry on Dec. 27, 1919, reached the second highest point: 150 ft. below the highest summit.

Saint-Saud, Comte de. Monographie des Picos de Europa. Etudes et voyages. 10 x 6½: pp. xiii, 272: ill. Paris, Barrère, 1922

— — — Cartes dressées par le Capitaine L. Maury. Separate atlas.

Schätz, Jos. Jul. Südtirol vom Brenner bis Salurn. Ein Buch vom Menschen, Bergen und der Schönheit des Landes. 12½ x 9½: pp. 95: plates.

Bozen u. München: Amonn, 1923

This has numerous good plates.

Schwartz, Myrtel. Drei Giganten des Hochgebirges. Meine Erinnerungen an deren Besteigung. 8½ x 5½: pp. 98: plates.

Basel, Basler Druck-Verlags-Anst. 1921

Ascents of Monte Rosa, Matterhorn, Popocatepetl.

Sinclair, Jos. H., and Theron Wasson. Explorations in eastern Ecuador. In Geogr. Rev., New York, vol. 13, no. 2. 10 x 7: pp. 190-210: map, plates.

April 1923

The plates include Mts. Sumaco and Sangay.

Ski. Jahrb. d. Schweiz. Ski-Verbandes. 16-17. Jahrg. 8½ x 5½: pp. 128: 154: plates. 1921, 1922

Contents:—1921. *O. Hug*, Die Mechanick d. Gletscher: *W. Knoll*, Aertzliche Untersuchungen v. Skirennfahren 1921: *A. Zarn*, Abfahrt v. Mattlishorn: *G. Walty*, Skifahrt z. Arlberg: *O. Gurtner*, Lauberhorn: *A. Graber*, Im Gebiete d. Alb. Heinhütte.

1922. *O. Hug*, Alpinismus u. Skilauf: *W. Knoll*, Praktische Schlussfolgerungen aus d. ärztlichen Untersuchungen: *M. Kurz*, Tentatives et premières ascensions hivernales aux plus hauts sommets valaisans:—Gr. Combin 1903-1916: Dent Blanche 1893-1911: Ober Gabelhorn 1893-1920: Zinal Rothorn 1911-1920: Bieshorn 1910-1919: Dent d'Hérens 1910-1920: Matterhorn 1862-1920: Breith. 1899: Pollux 1913, 1917: Castor 1913, 1917: Lyzkamm 1885-1915: Mte Rosa 1883-1912: Strahlhorn 1901-1913: Rimpfischhorn 1893-1915: Allalinh. 1907-1915: Alphubel 1910-1915: Täschhorn 1920: Dom 1894-1917: Lenzsp. 1918: Steckenadelh. 1921: Weismiess 1910: Laquinh. 1918: Fletschh. 1914 (short accounts of those various ascents): *H. Lauper*, Hinter Feldschyn u. Mütterlishorn: *K. Danegger*, Im rechtsufrigen Thunerseegebiete.

Sports, Winter. Gamage's booklet. 9½ x 6½: pp. 40: ill. 1922-3

— Sports d'hiver. Paul Gleize. 9½ x 6½: pp. 40: ill. 1922

Steinitzer, Alfred. Das Land Tirol. Geschichtliche, kultur- u. kunstgeschichtliche Wanderungen. 6½ x 4½: pp. xvi, 610: ill. Innsbruck, Wagner, 1922

A most interesting vol. on history, art and architecture.

Strachey, J. St. L. Adventure of living. London, Hodder & Stoughton, 1922

pp. 485-6. As a young man I travelled in sledges over most of the alpine passes in the winter, for owing to my uncle John Symonds being one of the discoverers of the high alps in winter, I was early so to speak in the snowfield.

I crossed the Splügen by day in winter and by moonlight in summer. I crossed the St. Gotthard in a vetturino carriage. I have crossed the Simplon and I have crossed the Bernina, and all the other passes of the Grisons in the snow in mid-winter many times. For those who like, as I do, sharp cold and ardent sunlight, there is nothing more luxurious, and if one can see or hear, as sometimes happens, an avalanche really close without getting into it, a pleasant spice of danger is added. But I do not love the alps merely in winter. Though no expert climber, I was fond of the mountains to the point of fanaticism, and though I never got higher than 11,000 ft., or little over, I had the extremely interesting experience of falling into a crevasse. Fortunately I was well held by the rope against the white edge of the abyss while my legs kicked freely in the illimitable inane.

Is there anything in the world like being called in the grey dawn by the man with the axe and the rope? Can anything equal that succession of scenes? The alpine village in the sleepy silence, the pastures and the cultivated land, the inevitable little bridge over the inevitable little stream, then the belt of pines, then the zone of flowers, best and gayest of all gardens, and last the star gentians and the eternal snows? A holiday heart, fit years of age, a friend, a book of poetry, and a packet of food in one's pocket!—truly if there is a paradise, it is here.

- Swiss Travel Almanac.** Edited by the Swiss Tourist Information Office.
 Summer Season 1922. $7\frac{1}{2} \times 5$: pp. 111: plates. 1922
 — Winter 1922-3. 8×5 : pp. 111: plates. Olten, Walter, 1923
 Among the articles are:—*A. Lunn*, Mountaineering on ski: *Prince Waldstein*, Visit to Grindelwald, 1600: *H. C. H. Marriott*, Hints for a ski beginner.
 — Summer Season 1923. 8×5 : pp. 111: ill. Olten, Walter, 1923
 This contains:—*J. E. C. Eaton*, Mountaineering in Switzerland: *W. G. Lockett*, J. A. Symonds and the Alps: *W. A. B. Coolidge*, A great English climber, *Wm. Mathews*: *P. Lang*, Helvetic bibliography.
Thorington, J. Monroe. Old trails and new peaks in the Canadian Rockies. In Bull. Geogr. Soc., Philad., vol. 20, no. 4. $10 \times 6\frac{1}{2}$: pp. 120-131: ill. Oct. 1922
Toll, Roger W. The Mountain Peaks of Colorado. 9×6 : pp. 59. Colorado Mountain Club, 1923
 Containing a list of named points of elevation.
Tursky, Franz. Führer durch die Glocknergruppe. $6\frac{1}{2} \times 4$: pp. xiii, 164: maps, plates. Wien, Artaria, 1923
 An excellent climber's guide to the district.
 — — Der Grossglockner und seine Geschichte. $7\frac{1}{4} \times 5$: pp. 143: plates. Wien and Leipzig, Hartleben, 1922
 Chapters on geology, glaciers, botany, poetry, painting, map, history of ascents, routes, huts, etc. An excellent monograph.
Valot, J. Evolution de la Cartographie de la Savoie et du Mont Blanc. Fasc. 1, avec un atlas . . . reproduisant 123 cartes anciennes. $10 \times 6\frac{1}{2}$: pp. 32. Paris, Barrère, 1922
 — — Atlas de 26 planches. 22×19 .
 Reprints of maps from 1478.
 — Le massif du Mont Blanc. Paysages caractéristiques et documentaires. Tome 2. La haute chaîne. $9\frac{1}{2} \times 7\frac{1}{4}$: pp. 14: 84 plates. Paris, Fischbacher, 1923
Wagner's Führer durch Nordtirol Vorarlberg die angrenzenden Gebiete von Oberbayern und den Tauern. Bearbeitet von H. Schwaighofer. $5\frac{1}{2} \times 4\frac{1}{2}$: pp. 432: maps. Innsbruck, Wagner, 1922
Wagner, Henry R. The Plains and the Rockies. A bibliography of original narratives of travel and adventure 1800-1865. 10×7 : pp. (v), 193. San Francisco 1921
 A list of works and notes thereon concerned with the early exploration of the Rocky Mountains, beginning with Alex. Mackenzie who was the first to cross the Continent in 1793. Among other writers included are Lewis and Clark, Alex. Henry, David Thompson, Ross Cox, David Douglas, Wilkes, Fremont, Palliser, etc.
White, Alf. G. New York to Mexico City. In Bull. Geogr. Soc., Phil., vol. 21, no. 1. $10 \times 6\frac{1}{2}$: pp. 22-9: sm. pl. Orizaba. Jan. 1923
Williams, M. B. Through the heart of the Rockies and Selkirks. $9\frac{1}{4} \times 6\frac{1}{4}$: pp. 105: map, plates. Canada, Minister of Inter., 1921
Winter, J. B. From Switzerland to the Mediterranean on foot (and extracts from my mountaineering journal). $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 124: plates. London, Laurie, 1922
 Sierre, Thonon, Annécý, Briançon, Cannes.
Winter Sports in the Czechoslovak Republic. $9 \times 4\frac{1}{2}$: pp. 16: ill. 1922-3
Zinniker, Otto. Allein aufs Lauteraarhorn. In Deutsche Alpenz. Jahrg. 18, Hft. 10. 12×9 : pp. 219-224. 1922
Zsigmondy, E., u. Wm. Paulcke. Die Gefahren der Alpen. 7. Aufl. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. xvi, 387: ill. München, Rother, 1922. 4/-

Older Works.

- Bourgeat, Abbé.** De l'envahissement des glaciers de la Dôle. Ex. Ann. Soc. Sc. Bruxelles 1883. $9\frac{1}{2} \times 6\frac{1}{4}$: pp. 12: map. 1883

- Ceresa, G. F.** 600 Kilometri alle Alpi. Escursioni alpine . . . dal colle di Frejus al Brenner. $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 104. Torino, Favale, 1869
- Collomb, Ed.** Note sur l'époque d'apparition des glaciers dans l'Europe centrale. In C.R. Acad. d. Sc. Paris, t. 31, pp. 709-12. 11 x 9. Nov. 1850
- Dill, J. R.** Panorama der Siedelhorn sur le Grimsel. 48 x 5: pan. Berne, c. 1865
- Faris, John T.** Seeing the Far West. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 304: maps, plates. Philadelphia and London, Lippincott, 1920. 25/-
- Grill, J.** Bergführer-Buch 1870-1899. Copy of, in MS.
- Huc, Evariste Régis.** Souvenirs d'un voyage dans la Tartarie, le Thibet et la Chine pendant les années 1844, 1845 et 1846. 2 vols. $8\frac{1}{2} \times 5$: pp. 426: 516: map. Paris, Le Clere, 1850
- Lake District.** The northern tourist. Seventy-three views of lake and mountain scenery, etc., in Westmorland, Cumberland, Durham, and North-umberland. Gage d'amitié. $10\frac{1}{2} \times 8\frac{1}{4}$: pp. iv, 149-220: 69 plates. Paris and London, Fisher (1836)
- This is the third annual vol. of Picturesque Lake and Mountain Scenery of England.
- Lampugnari, Giuseppe.** In Valsesia. La Val Grande ed il Monte Rosa. Estr. 'La Valsesia,' C.A.I. Verbano. $9\frac{1}{2} \times 7$: pp. 84: plates. Torino, Paravia, 1907
- De Lapparent, A.** Action de la glace. Ex Traité de géologie. 1 éd. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 248-507. c. 1882
- 3 éd. pp. 254-308. c. 1890
- Lefronne.** Notice de l'ouvrage intitulé: Histoire du passage des Alpes par Annibal . . . par J. A. Deluc. Ex Journ. d. Savans. $9\frac{1}{2} \times 7\frac{1}{2}$: pp. 16: map. Janv. 1819
- Murray.** Manuel du voyageur en Suisse . . . Traduit du Handbook, de Murray, par Quétin. Avec un grand nombre de documents nouveaux sur les montagnes des Grisons. 6 x 4: pp. lxxii, 586: map, 2 plates. Paris, Maisson, 1844
- (G. Nicholson, Editor.)** The Cambrian traveller's guide, and pocket companion, containing the collected information of the most popular and authentic writers. 8 x $4\frac{1}{2}$: pp. vii, 719. Stourport, Nicholson: London, Symonds, etc., 1808
- On p. iii is a short bibliography of travels in Wales. Various ascents of Snowdon and Cader Idris are quoted.
- Norway.** Tracks in, of four pairs of feet delineated by four hands. 7 x $4\frac{1}{2}$: pp. viii, 95. London, Sampson Low, 1884
- de Pereda, José M.** Dans la montagne (Peñas arriba). Traduction de H. Collet et M. Perrin. $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 337. Paris, Delagrave, 1918
- An interesting novel.
- Les Pérégrinations d'un alpiniste à travers les Alpes-maritimes, les Basses-Alpes, Le Dauphiné, La Savoie, La Suisse . . .** par un alsacien. $8\frac{1}{4} \times 5$: pp. 314 Nice, Visconti: Paris, Marpon Flammarion (1883)
- Prevost, Constant.** Sur l'apparition récente des glaciers en Europe. In C.R. Acad. d. Sc. Paris, t. 31, pp. 313-15. 11 x 9. Nov. 1850
- Schwinner, Robert.** Der Mte Spinale bei Cämpiglio und andere Bergstürze in den Südalpen. Inaug.-Dissertation, Zurich. 9 x 6: pp. 127-197: map. Zurich, 1912
- Stöber, Adolf.** Reisebilder aus der Schweiz in Gedichten. 5 x $3\frac{1}{2}$: pp. 128. St. Gallen, Scheitlin u. Zollikofer, 1850
- Switzerland.** Le guide des voyageurs en Suisse. Précédé d'un Discours sur l'état Politique du Pays. [J. B. Reynier ?] $6\frac{1}{2} \times 4$: pp. lx, 391. Paris, Buisson, 1790

Wales. The Cambrian tourist, or Post-Chaise Companion . . . 6th ed. $6\frac{1}{2} \times 4$: pp. vii, 316: plates, map. London, Whittaker, 1828

— The Cambrian traveller's guide in every direction. 2nd edition corrected and considerably enlarged. $9 \times 5\frac{1}{2}$: pp. xiii, 1468: map.

Stourport, printed by the editor: London, Longmans, etc., 1813

In the section on Snowdon occurs: 'It is worth remarking here that a traveller intent on ascending mountains should be provided with such nails as M. A. Pictet recommends to those who ascend the Glaciers.' Pennant's, Bingley's and Evans' ascents are quoted; Akin's ascent of Cader Idris; also remarks on Cader Idris by Mr. Donovan from Univ. Mag., Mch. 1808.

Wills, Alfred. Le nid d'aigle et l'ascension du Wetterhorn. $7\frac{1}{4} \times 4\frac{3}{4}$: pp. 294: map, plate. Paris, Meyrueis, 1864

NEW EXPEDITIONS.

Mont Blanc Group.

THE COL MAUDIT (4051 m. = 13,288 ft.) between Mont Maudit and M. Blanc du Tacul.

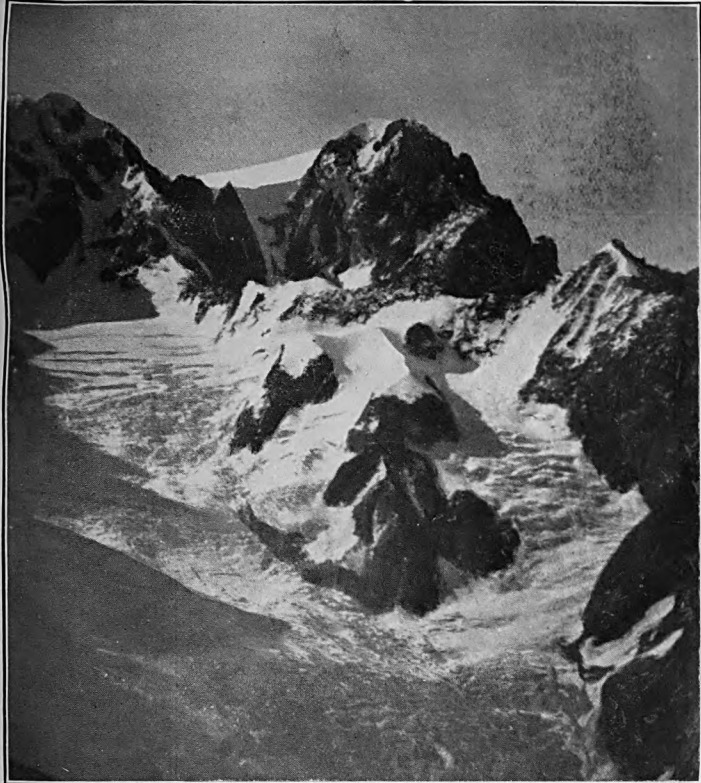
We, my brother Baptiste, Francesco Ravelli, Gustavo De Petro (C.A.I. Turin) and I effected this passage on July 26, 1921.

Leaving the Col du Géant Inn at 2.40 A.M., we reached the base of the ample col between Mont Maudit and M. Blanc du Tacul at 4.30 A.M. As it was impossible to cross the very open *rimaie* we had to bear along it till beyond the mouth of the couloir of the S. face of M. Blanc du Tacul where we found a crossing. By means of ice-slopes and easy rocks we were able to gain the middle of the couloir of our col by 6.30 A.M. The line from this point continued, at 7 A.M., directly by the bottom of the couloir itself, easy rocks, and finally by the wall of the left (N.) bank, fairly difficult and very steep (see Plate). The col was reached at 9.50 A.M. From here we ascended M. Blanc du Tacul by its S.W. arête and leaving at 13 by its shoulder and N.W. face, the Col du Midi was gained at 14.30 and the Géant Inn at 17.15.

The route is, throughout, exposed to falling icicles from the cornice of the col, but this danger can be safely avoided by starting the ascent of the couloir at dawn and forcing the pace. We lost $1\frac{1}{2}$ hour in turning the *rimaie* and another hour in attempting, unsuccessfully, an arête more to the left than the couloir. This drove us back into the couloir. Taking into account these $2\frac{1}{2}$ hours lost we are of opinion that, in normal conditions—the summer of 1921 was exceptionally bad for the glaciers—the Col Maudit could be easily gained in 2 to $2\frac{1}{2}$ hours from the foot of the couloir, i.e., in time to reach the summit of M. Blanc over the shoulder of M. Maudit and up the Mur de la Côte.

G. F. GUGLIERMINA,

Hon. Member of the Varallo Section C.A.I.



Telephoto Gugliermina.

COL MAUDIT AND MONT BLANC DU TACUL.
From Mt. Paramont (Rutor).

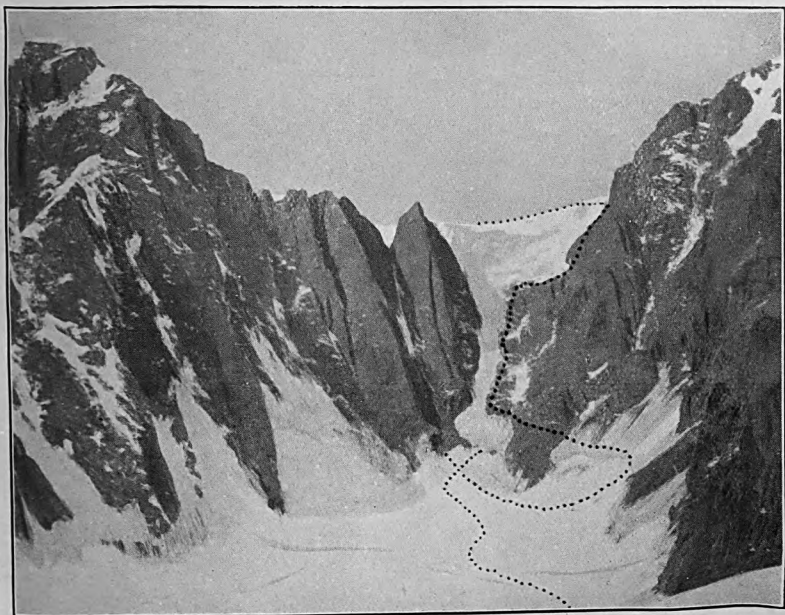


Photo F. Ravelli.

LE COL MAUDIT
From the Tour Ronde

Digitized by Google



Photo F. Ravelli.

SOURCE OF PEUTERET AVALANCHE
Near Pte. 4381, in 1920.

Bernese Oberland.

ARÊTE BETWEEN LÖTSCHTHALER BREITHORN (3782 m. = 12,412 ft.) AND GREDETSCHHÖRNLI (3662 m. = 12,015 ft.) BY A S. BUTTRESS. August 29, 1922.—Mr. E. R. Blanchet with Peter Marie Zurbriggen of Saas Fee. The route for this quite first-rate expedition starts from the new Baltschieder Hut (Mr. Blanchet bivouacked beside it, then unfinished), crosses the Innerer Baltschiederfirn to the foot (point 2986 Siegfried) of the very long and very steep arête, which eventually joins the main arête between the Lötschthaler Breithorn and the Gredetschhörnli. A succession of gendarmes, all difficult, and several very difficult, occupied the climbers from 8 A.M. to 3.30 P.M. Much mutual help was needed. Only once was a traverse made on the left to avoid an absolutely unclimbable overhang. The gendarme which from below seems the last is actually only half way. A violent storm caused much hindrance. Acrobatic climbing up a vertical difference in altitude of about 700 m. Once the main arête is reached all difficulty ceases, although the summit of the Lötschthaler Breithorn is some way away on the left. The party returned by the Gredetschjoch and, getting lost in thick mist and a violent storm, had great work to avoid a bivouac on the glacier.

VARIOUS EXPEDITIONS.

Mont Blanc Group.

MONT BLANC DE COURMAYEUR (Pt. 4381 m. = 14,370 ft.), BY S. ARÊTE. August 1922. Signor F. Ravelli, with a friend and a porter.—The party, from the Gamba hut, crossed the S.E. arête of the Innominata a bit above the col and gained the Col de Peuteret, using in its lower part the Croux-Jones arête ('A.J.' xxiv. 677, with route-marked photograph). The next day they gained Pt. 4381 on the main S. arête of Mont Blanc de Courmayeur, but were there overtaken by bad weather, and made an arduous descent to the Gamba hut, reached only at 11 P.M. On the way the party passed quite close to the place whence the great avalanche described in 'A.J.' xxxiii. 433 broke away, and Signor Ravelli is good enough to send us the accompanying photograph of the place.

ALPINE NOTES.

'BALL'S ALPINE GUIDE,' THE WESTERN ALPS.—A new edition (1898) of this work, reconstructed and revised on behalf of the Alpine Club by the Rev. W. A. B. Coolidge, Fellow of Magdalen College, Oxford, can be obtained from all booksellers, or from Edward Stanford, Limited, 12 Long Acre, W.C. 2. It covers the Western Alps from the Mediterranean to the Simplon, S. of the Rhone. Price 13s. net, post free 13s. 8d. net.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART I.—A new edition (1907) of this work, reconstructed and revised on behalf of the Alpine Club under the general editorship of the Rev. A. A. Valentine-Richards, Fellow of Christ's College, Cambridge, can be obtained from all booksellers, or from Edward Stanford, Limited, 12 Long Acre, W.C. 2. It includes those portions of Switzerland to the N. of the Rhone and Rhine Valleys. Price 7s. 6d. net, post free 7s. 11d. net.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART II.—A new edition (1911) of this work, reconstructed and revised on behalf of the Alpine Club under the general editorship of the Rev. George Broke, can be obtained from all booksellers, or from Edward Stanford, Limited, 12 Long Acre, W.C. 2. It includes those Alpine portions of Switzerland, Italy, and Austria which lie S. and E. of the Rhone and Rhine, S. of the Arlberg, and W. of the Adige. Price 8s. 6d. net, post free 9s. net.

MAP OF THE VALSESIA.—Some copies of the Map issued with the ALPINE JOURNAL, No. 209, and of the plates opposite pages 108 and 128 in No. 208, are available and can be obtained from the Assistant Secretary, Alpine Club, 23 Savile Row, W. Price for the set (the Map mounted on cloth), 3s.

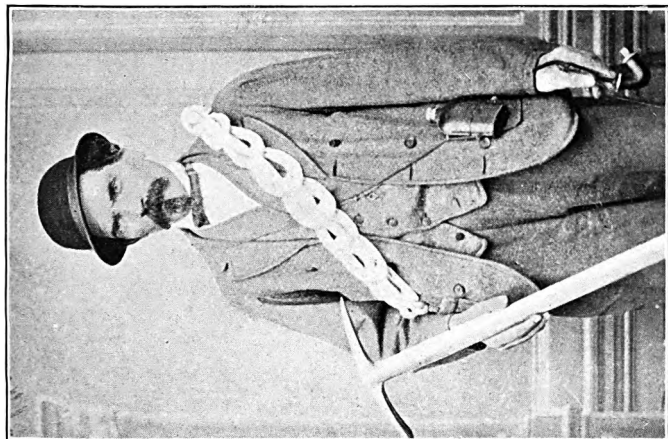
THE 'GUIDE DES ALPES VALAISANNES.'—Vol. II., from the Col de Collon to the Théodule, edited by Dr. Dübi. The French edition, thoroughly revised and with the route-marked illustrations, can now be obtained from Albert Kündig, Geneva.

THE 'CLUBFÜHRER DURCH DIE BÜNDNERALPEN.'—Vol. IV., covering the Bregaglia and the Disgrazia group, by H. Rütter, with the assistance of Christian Klucker, can be obtained from Sauerländer and Co., Aarau, Switzerland.

ALPINE JOURNAL.—A full set, Vols. I. to XXXI., in brown cloth, and XXXII. to XXXIV. in parts, is for sale.—Apply, Assistant Secretary.



J. OAKLEY MAUND.
(Obit. Notice by C. T. Dent, A. J. 189-191 XXI.)



J. J. MAQUIGNAZ
about 1867.

(Presented by Sig. Cav. Guido Rey.)

THE ALPINE CLUB OBITUARY :

	Date of Election.
Stone, J. K. (Rev. Father Fidelis)	1860
Latham, F. L.	1862
Bircham, F. T.	1864
Foster, C. Finch	1864
Cheetham, F. H.	1867
Whitwell, E. R.	1868
Gage, J. E. P.	1877
Gordon, Rev. J. M.	1896
Kingdon, H. F.	1897
Osler, J. T.	1903
Casella, Georges	1918

HIS HOLINESS THE POPE.—Mr. Freshfield had the honour of being received by his Holiness in April last, when he presented, on behalf of the Alpine Club, a portfolio of enlarged photographs of the Mount Everest district. His Holiness conversed at length on and showed great interest in the details of the expedition. He desired his good wishes and thanks to be conveyed to the Club.

THE death at Zermatt in March is announced of PETER TAUGWALDER, the sole survivor of the accident on the Matterhorn in 1865. Born on November 12, 1843, he was accordingly in his eightieth year. Note 24 of 'A.J.' xxxii. 31 gives a few of his principal expeditions. He is stated to have ascended the Matterhorn 125 times.

Mr. Whymper's strictures on his conduct after the famous accident were undoubtedly very severe, but some allowance must be made for intense excitement on both sides and for possible misunderstanding owing to scanty acquaintance with each other's language. In any case, Taugwalder lived to become the great master on the Swiss side of the fatal mountain and an able and careful mountaineer.

In the *Journal de Genève* for March 27, Captain Charles Gos, the well-known writer, pays to the memory of the old guide a characteristically handsome tribute.

SAAS GRUND.—Hotel Monte Moro has been taken over by Mr. Wither's old guide, Adolf Andenmatten, who hopes for English patronage.

'THE CONQUEST OF THE NEW ZEALAND ALPS,' by Samuel Turner.—In the review of Mr. Turner's book in the last ALPINE JOURNAL, it was stated that he threw doubt on Zurbriggen's ascent of Mt. Cook. He points out that on p. 206 he writes : ' Since my last statements I have seen Mt. Cook and been on its slopes

a good deal, and from what I know now I have no hesitation in stating that I believe Zurbriggen did reach the summit of Mt. Cook after he left Adamson at about 10,000 ft.'

That Adamson did accompany Zurbriggen to about 10,000 ft. and that Zurbriggen was alone only for the last 2000 ft. is, of course, well known.

Mr. Turner maintains that Fyfe, G. Graham and Clark, who on December 28, 1894, made the first ascent of the highest summit of Mt. Cook, were *guides* and not amateurs, and points out that a Dr. Kronecker, writing earlier in 1894, so terms them.

The reviewer maintains his own opinion on this question.

A convenient summary of the various routes up Mt. Cook, with illustrations, is given in the Rev. H. E. Newton's article, 'A.J.' xxix. 12.

THE FRESHFIELD GROUP ('A.J.' xxxiv. 387 *seq.*).—Dr. Thorington writes: 'Mt. Bergne and Mt. Lambe were reached *via* the Conway basin from a camp near the cliffs N. of the ice tongue. The first ascent of Mt. Coronation was made in 1918 by Mr. A. J. Campbell of the Survey, the cairn being built rather lower down to suit survey requirements. The ascent of this mountain by Dr. Thorington's party was the second (first from the E.).'

In the lower illustration, facing p. 388, the summit of Mt. Barnard, 10,955 ft., the highest peak of the group, is seen in the background, $1\frac{1}{2}$ inches from the right-hand margin. This illustration is panoramic and continuous with the lower illustration facing p. 389.

WINTER SPORTS ON THE EQUATOR.—At an altitude of 15,800 ft. on Mt. Kenya is a frozen lake offering good skating, while the surrounding snow slopes permit of the usual winter sports. A motor road has now been made from Nairobi, the rest-house at Chogoria being reached the first day in 9 hours, and the lakeside rest-house next day in about 3 hours by what is described as a beautiful winding road through gorgeous primeval forest and over open uplands. The best time is between July and February.

A NEW INN ON THE THÉODULE.—The Turin section of the C.A.I. have bought the site of the old inn now in ruins and propose to erect an inn with modern equipment. The dining-room is to seat fifty persons and sleeping accommodation is provided for seventy, besides guides. The cost is to be covered by an issue of 6 per cent. shares of 500 lire redeemable by annual drawings over thirty-five years. Applications to C.A.I., Via Monte di Pietà 28, Turin.

THE PINNACLE (LADIES') CLUB now counts sixty-three members. Regular meets are held and a journal is to be published. Mrs. Winthrop Young is the President.

S.A.C. ACCOUNTS FOR 1922.

Expenditure on new huts, repairs, etc.	Fr. 33,388
„ „ Jahrbuch, vol. 56	100,935
„ „ Alpina	41,964
Total expenses excluding Jahrbuch	155,921
„ receipts	193,025
New members	1,838
Total	22,418

REVIEWS.

Below the Snow Line. By Douglas Freshfield, former President of the Alpine Club and of the Royal Geographical Society. London: Constable. 18s. net.

THIS volume of Mr. Freshfield's minor climbs should meet with a hearty welcome. Most of the articles were originally published in this JOURNAL, but they well deserve their appearance in book form. Mr. Freshfield has the gift of bringing before the eyes of his readers the narrow glen, the spacious valley, the glorious mountain view, which he wishes to describe, with a precision of detail and a perfection of colouring which few mountaineers have attained.

There are chapters on: The Maritime, Bergamasque, and Dinaric Alps—Bye Corners in Savoy—Behind the Bernina—The Pania della Croce, the Gran Sasso d'Italia—Corsica—Taygetus and Parnassus—The Kabyle Highlands—The Mountains of the Moon—and Byways in Japan.

It is pleasant to find one who knows the splendours of the Caucasus and the Himalaya enjoying, with an enthusiasm which communicates itself to his readers, the charms of mountains which, though of humbler height and smaller reputation, deserve a place in the peerage of earth's summits. Of course, climbing on these lower heights is possible when on the great mountains it is perilous; and so on these hills, of which Mr. Freshfield treats, the climber can enjoy himself when the great peaks are 'out of season.' How great that enjoyment may be, and how easy of attainment, a perusal of this book will make plain, for here his readers may acquire the information of a guide-book whilst they are enjoying the charm of his style and the wisdom of his experience. Moreover, while he climbs Mr. Freshfield never forgets the human interest of his adventures. He gives us living pictures of the men he met in outlandish spots—e.g. the priest of San Nicolo (on the way to the Gran Sasso), and the Kaid of Tiflit (in Kabylia) who 'might have appeared on any classical stage as Priam.' 'Our guide (to Tiflit) came very near my idea of Ulysses. He was a man of middle age, tall, sunburnt, and sinewy: he carried François (Devouassoud), who weighed at least 14 stone, over a stream with

the greatest ease. In his demeanour and in the way in which he draped his cloak there was a certain nobility: at the same time there was something in his look which made one suspect that in case of need his strength would find adequate support in his wits.'

We hope that many who read these articles in the *ALPINE JOURNAL* will re-read them in their new presentation—*δὲς ἡ τρὶς τὰ καλά*.

The book is furnished with nine maps, and an excellent index.

G. Y.

The Alpine Club Register, 1857-1863. By A. L. Mumm. London: Arnold, 1923. 21s.

MANY of us have known for years of Mumm's 'Dossiers' but few realised what an amount of work and meticulous care had been bestowed on them. The present volume of nearly 400 pages covers only the earlier years, but it contains names that have been household words since our boyhood. The book is not simply a register; many of the 'lives' are told in a very interesting manner, giving a chronological account of the Alpine activities of members, besides a summary of the principal episodes of their lives. In but few cases do the Alpine records appear to have been untraceable. One striking feature brought out by this book is the wide travelling done by these pioneers of ours.

There can be little to criticise in any work of the present author. He might perhaps have laid greater stress on the enterprise and intuition of the Parkers. The first ascent of the Ostspitze is credited to the Smyths (p. 299)—the paper in 'A.J.' xxxi. ascribing the first ascent to Ulrich's guides in 1848, and the second to the Schlagintweit's party in 1851 not being mentioned.

There are very few printer's errors in a book which lent itself to many.

The volume is one that can be picked up at any moment; one is certain of finding something of interest and suggestions for one's next journey. It is to be hoped that the series will be continued. The author would, meantime, welcome; we feel sure, the indication of any errors or omissions.

Oxford and Cambridge Mountaineering, 1922. Oxford: The Holywell Press Ltd. 2s. 6d.

WE congratulate the authors on an excellent number. Within the modest limit of less than a hundred pages is contained a varied and well-chosen collection of interesting articles. *Seniores priores*: Dr. A. D. Godley contributes 'Sub Rosa,' a well-illustrated article rich in experience on the tour of Monte Rosa; while Dr. T. G. Bonney, who gained his first view of the peaks and glaciers of the Alps in 1856, writes with unabated interest on the 'Memories of a Geologist.'

Many climbs were accomplished in 1922, the Matterhorn by the Z'Mutt ridge being the most formidable. An Oxford party at

Chamonix climbed the A. du Tacul (loose snow above the leader's knees), the Grands Charmoz, the Blaitière, the Argentière, the Chardonnet, and, moving on to Zermatt, ascended the Rothhorn, Dom, and Dent Blanche, to say nothing of lower summits.

A Cambridge party traversed the Graians (an ideal district for beginners): starting with the Central Levanna they finished with the Nomenon, and their story is well told by Mr. A. E. Storr. They slept a night at Perrebeche in Val d'Orco, where 'the Cantina was surprisingly clean,' another at the Muanda di Teleccio (preparatory to a successful attack on the Tour St. Pierre), another at the Herbetet Chalet, whence they ascended the E. ridge of the Herbetet. Oxford also had a Club Meet in the Graians, making their headquarters at the V.E. Refuge. Their most enjoyable climb was on the Punta di Ceresole, when the weather relaxed its rigour and gave them a perfect day.

Climbing in the Dolomites, Skye, and Lakeland finds its place.

There is an excellent paper on 'Courses Collectives,' by the President of the C.U.M.C., who sums up the advantages of such companionship thus: 'I had set out with strangers: I parted from friends.' All success to the enterprise and enthusiasm of our younger brethren.

G. Y.

Clubführer des S.A.C. Bündner Alpen. Vol. IV. Southern Bregaglia and Monte Disgrazia. Edited by H. Rütter. With numerous illustrations and route markings. Pp. xvi + 182. Aarau, 1922.

THIS compact and handy volume reflects the greatest credit on its distinguished editor. When we read that Christian Klucker, Dr. Claude Wilson, Count Bonacossa, and other authorities are thanked by the editor for their assistance and revision, there is little wonder that this, the fourth guide book published on the district, should be the most indispensable of all. If only the entire district bounded by the Muretto Pass, Valtellina, Lake Como, and Val Bregaglia could have been included, the reviewer's satisfaction would have been complete.

The text is admirable, concise and clear. It is apparently almost impossible to detect even an unimportant slip. No superfluous descriptions of routes appear. The illustrations, however, are neither artistic nor are the routes sometimes correctly marked. The reviewer has yet to be shown a series of satisfactory outline sketches *especially* for rock mountains: either they are taken from too great a distance for anything approaching accuracy (cf. pp. 40, 152, 153), or they are taken from a few yards off, when they appear to us entirely superfluous (cf. pp. 48, 130). This criticism, however, applies to all previous *illustrated* 'Club' guides.

It is a most ungrateful task trying to pick holes in another's work, but there is an unfortunate mistake in the illustrations on pp. 151 and 157. The 'ordinary' route up Piz Badile is in each case apparently marked on the *S.W.* slope of the great S. buttress of the mountain instead of the

S.E. No such error, fortunately, occurs in the text, where the route is perfectly correctly described as being by the said *S.E.* slope. Still the average guideless party, ignorant perhaps of German and only studying the marked outline sketch, will be more than likely to get into hideous trouble on this, perhaps the most famous summit in the district. We write with a vivid recollection of a *descent* of the *S.W.* slope. No doubt the bad drawing of the peak is in part responsible for the error. Again, with reference to the said mountain, the *simple* way to climb the *E. arête* is to go to the Colle del Cengalo, turn point 3198 m. by a ledge to the *S.*, and then gain the *E. arête* and follow it to the top.

In the sketch (p. 46) of the Cime del Largo traverse, the great tooth—the crux of the traverse—which has to be turned to the *S.* by a descent of some 30–40 ft. on a spare rope, is not shown.

On p. 125, the dotted line leading to the gap, Bocchetta del Ago di Sciora, is marked in its commencement *far too high*. The rocks are there quite impossible.

Again, on p. 107, 'Le Forcellete from the *S.*,' the true pass, *pace* the illustration and text, is the great gap just *W.* of the Cacciabella ridge. In 1908 the reviewer's party, after descending a few broken rocks, glissaded down the entire couloir leading from just below the said great gap, the only trouble occurring about the tree line. The gap, therefore, cannot be described as 'impossible in its upper portions' (p. 108).

On p. 37, it should be noted that Anselmo Fiorelli and *not* Sertori was Castelnovo's guide.

It is very interesting historically that Klucker has discovered Mr. Freshfield's card on point 3223 m. This summit was therefore attained for the first time by the British party on the occasion of the first crossing of the Bondo Pass by travellers, July 8, 1865 (p. 140).

As regards the nomenclature, this appears to be now, at last, definitely fixed. Nothing could be more admirable. Objectionable and personal names disappear from the Swiss slope and Frontier Ridge.

Only one hope yet remains unfulfilled—a fresh edition of the Siegfried sheets 520 and 523, the several errors of which are fully commented on in the text. It would probably be too much ever to expect new and correct sheets of the highly inaccurate and illegible Italian Government Survey. Herr Rütter is *not*, however, responsible!

To conclude, all mountaineers are deeply indebted to Herr Rütter and the S.A.C. for this most admirable and painstaking work.

E. L. S.

Mountain Climbs. By Abate Achille Ratti (now Pope Pius XI.). Translated by J. E. C. Eaton. T. Fisher Unwin, Ltd. 8s. 6d.

THE appearance of this attractive little volume deserves to be noticed in this JOURNAL for more reasons than one. In the first place

a mountaineer-Pope is a novelty, and all who are interested in climbing will naturally wish to know as much as possible about his doings in that capacity. Such a book as this was the best and most effective way of gratifying this feeling of curiosity, and it is a further satisfaction to find that by far the largest part of the work of producing it (excepting, of course, the author's own share) was performed by members of the Alpine Club.

These considerations would hold good if the articles here translated were of a much lower grade of merit than they actually possess, but they are all well worth reading for their own sake, and one in particular, the impressive narrative of the traverse of Monte Rosa from Macugnaga to Zermatt in 1889, is of altogether exceptional interest. The exhaustive examination of this remarkable expedition in Mr. Freshfield's excellent Foreword leaves nothing further to say about it, and we need here only record our satisfaction that its story has been brought to the knowledge of English readers, and is now assured of the permanent place which it most certainly deserves in the annals of Monte Rosa.

Mr. Eaton has performed his task as a translator admirably, as usual, and Mr. Spencer is to be congratulated—also as usual—on his work in connection with the illustrations. Those of Monte Rosa especially form a most valuable and instructive series.

CORRESPONDENCE.

DEGREE OFFERED TO MR. FRESHFIELD.

LE RECTEUR À MONSIEUR DOUGLAS W. FRESHFIELD.

[The following communication has been received by Mr. Freshfield. The degree was conferred, as suggested, on June 5, on Mr. Freshfield in person.]

MONSIEUR,—Nous avons l'honneur de vous informer que l'Université de Genève, sur la proposition de la Faculté des Lettres, vous a décerné : le *Doctorat ès Lettres honoris causa*, en reconnaissance de votre œuvre littéraire, dans laquelle nous distinguons la Biographie d'H. B. de Saussure.

Cet ouvrage remplit une lacune de l'Historiographie genevoise, et élève un monument remarquable à ce grand savant qui fut en même temps un grand citoyen.

Tous les Genevois qui s'intéressent au passé de leur ville, vous sont reconnaissants d'avoir fait revivre cette belle figure trop oubliée.

Les nombreux alpinistes genevois ont été touchés de l'hommage rendu à celui que vous considérez comme le fondateur de l'alpinisme.

L'Université de Genève ne saurait oublier que vous êtes le représentant le plus autorisé de ces Pionniers de l'Alpine Club qui, suivant

les traces de Saussure, nous ont appris à connaître et à aimer nos montagnes.

Pour ces diverses raisons nous aimerions à vous témoigner notre reconnaissance par une remise solennelle de votre Diplôme qui nous permettrait de réunir autour de vous les Professeurs de l'Université, les descendants d'H. B. de Saussure et les représentants de l'alpinisme genevois.

Le 5 juin l'Université célèbre son 'Dies academicus' et, au cas où il vous serait possible de vous rendre à Genève pour cette date, nous serions particulièrement heureux de pouvoir vous remettre votre Diplôme au cours de cette cérémonie.

Veuillez agréer, Monsieur, l'assurance de ma considération distinguée.

(Signed) R. WEBER.

Cabinet de Recteur,
Université de Genève,
Genève, le 11 mai, 1923.

WINTER EXHIBITION OF PAINTINGS.

THE general impression first created in one's mind by the recent exhibition was the revival of pre-war memories. Formerly the picture show contributed in no small measure to make the winter functions of the Club within and without its walls the event of the year. From the 'uttermost parts of the earth the tribes came up to Jerusalem,' and although on this occasion the gallery was not so crowded as it used to be, one saw many old friends amongst the visitors, and when one turned to the pictures many familiar names we were pleased to welcome again as exhibitors.

The chief feature, however, of this winter's show was a memorial exhibition of the work of our late member, E. T. Compton, whose pictures occupied about half the wall space in the gallery. Compton always appealed to mountaineers, working as he did above the snow line; no contemporary artist was more appreciated by the climber, whatever his nationality. He knew the architecture of his subject so well, drawing the forms of his peaks, and the foregrounds, whether glacier or rock, with an accuracy and texture always to be admired. He stood alone as an interpreter of the snow mountains he loved.

Although we missed a number of his most famous pictures, a very representative collection of his best black and white drawings was loaned. Particularly did we note 'Drei Zinnen, from Toblinger'; 'The Berninascharte'; 'The Schmitt Kamin,' 'Fünffingerspitze': Rockclimbers. All so sketchy and vigorous in treatment.

It was natural that pictures of the Eastern Alps should predominate, as he lived so long in Bavaria, and in the two 'On the

Bavarian Border,' and panorama, 'Oetzthal Mountains,' we have good examples of his topographical work, almost photographic in their detail. Of his water colours, typical examples were loaned, notably 'Rothwand'; 'Schwartzsee, Styria'; 'Kuchelmoospitze'; 'Gross Glockner'; 'Mors Janua Vitæ'; 'The Saleinaz Glacier.'

Amongst the Compton collection in oils, Miss Broome lent a charming picture, 'Karersee: with Rosengarten Group,' perhaps the gem of this class, a well-composed subject, rich in colour schemes, with shadows reflected in the rich blue water of the lake, from the very marked background of forest, rock, and sky. Here we have Compton below the snow line letting himself go, and putting into his work his emotions and skill of the true artist.

In consequence of the limited space at the disposal of the powers that be (Mr. Sydney Spencer), the contributions from our other artist friends were fewer in number than usual. In the 'Silent Hills,' by Miss Katharine F. Clausen, we have a simple treatment of a big subject, pleasing in effect and well named. Cecil Hunt, so delightful with his colours, always seems ready at hand with his brush to catch the colour effects of his subjects in their most impressionable moods, and succeeds in producing very attractive pictures; they are all good, though we particularly noted No. 96, 'Brenta Dolomites from Monte Spinale.'

From the Hon. John Collier, painting in mid-winter, we have No. 120, 'On the Way to Vermala,' a striking picture in four colours, white of the snow, dark green of the pines, with a brilliant deep blue sky background, and if our memory serves us aright, grey for shadows. No doubt the colour values are correct; they strike one as being so hard, so strong, and yet gradually the picture grows on one, and when lighted up artificially, improves on better acquaintance. Such a picture requires to be by itself.

'Peaks in Mull,' No. 113, by W. Russell Flint, is an attractive sketch of snow-clad peaks in autumn or early winter garb, which might well induce climbers to visit the island.

'Under the Vines, Bignasco, Val Maggia,' No. 93, by Graham Petrie, is happy in its colouring. We suggest Mr. Petrie should give his attention to subjects nearer the snow line.

Col. H. R. N. Donne, confining himself to sub-Alpine subjects, added some dainty sketches, combined of lake, mountain and architecture in a delicacy so characteristic of his brush.

Colin B. Phillip was represented with two Skye pictures, one of which was quite new to us, No. 47, 'The Chioch.' Our friend obviously enjoys interpreting the boiler plate slabs of his beloved Coolins. In this drawing we have the massive, sombre dark grey precipitous cliffs of the Chioch pinnacle, relieved in the foreground by the faded grasses in their sere and yellow tints. It is a fearsome place, and as such the artist depicts it. From H. A. Trier we have work of quite another school. In No. 148, 'The Jungfrau,' there is the dash of impressionism, the colour laid on with boldness and

vigour, which appeals to us as amongst the best pictures in the exhibition. In Miss Hilda Hechle's contributions, 'Sunset Fires,' Chamonix Aiguilles, No. 123, she has very successfully interpreted one of the most impressionable effects it is the privilege of mountaineers and visitors to enjoy in the mountains.

'Aiguille Verte from the Flégère,' No. 138, by Noel Rooke, recalls an Elijah Walton treatment, both as to subject and colour. 'Tajwas Nalla, Souamerg,' No. 141, by Miss Myrtle Fasken, with a foreground of brilliant Alpines, suggests a flora rivalling anything which the Alps may offer.

No. 134, 'The Argentière Glacier, 1820,' by J. J. Chalon, lent by Professor J. N. Collie, although nearly a century has passed since it was painted, recalls the work of a Swiss artist who is said to have taught Queen Victoria painting. Chalon's father was a refugee in this country at the period of the Protestant persecutions. Comparing this picture with that by the Hon. John Collier of the same glacier, and in the reading-room of the Alpine Club, it will be observed that the glacier has considerably advanced since the first picture was painted.

In the collection of pastels contributed by Dr. Somervell of the Everest Mountains, we have one small sketch, No. 161, in which the intrepid mountaineer lets himself go to give us an impression of a monsoon such as brought last year's expedition to a close.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Tuesday, November 7, 1922, at 8.30 P.M., Professor J. Norman Collie, LL.D., F.R.S., *President*, in the Chair.

The following candidates were balloted for and elected Members of the Club, namely, Capt. J. G. Bruce, M.C., Mr. H. R. C. Carr, Mr. R. C. C. Carr, Capt. G. I. Finch, M.B.E., Professor J. W. A. Hickson, Capt. C. J. Morris, Major H. T. Morshead, R.E., D.S.O., Capt. J. Noel, Major E. F. Norton, D.S.O., M.C., and Mr. S. L. Pearce, C.B.E.

The PRESIDENT announced the deaths of the following Members:

H.S.H. The Prince of Monaco, elected an Honorary Member in 1921. He was Grand President of the Alpine Congress which took place at Monaco in May 1920, and was greatly interested in scientific research.

Mr. V. H. Gatty, elected 1894. Contributed a number of Papers to the ALPINE JOURNAL. He was a great traveller and a good mountaineer. Several first ascents are to his credit. An obituary notice will be found in the JOURNAL just published.

Sir George Prothero, K.B.E., Litt.D., elected 1874. He was a Fellow of King's College, Cambridge, and was well known as a great scholar and historian.

The Rev. M. A. Bayfield, elected 1877. Rector of Hertingfordbury, Hertford. He had been headmaster of several schools, and had edited a number of Greek plays.

Mr. Edward Backhouse, elected 1904. He was killed on the Leiterspitze during the summer.

Mr. Henry Symons, elected 1903. He was a regular attendant at the meetings of the Club and well known to a good many Members. He was a great linguist.

Brig.-Gen. F. G. Lucas, elected 1908. Commanded the Gurkha Scouts in the Tirah Expedition 1897-98, and took part in the Great War 1914-18, including Mesopotamia. He was the recipient of many honours.

Mr. F. T. Bircham, elected 1864. A very old Member of the Club.

Mr. H. F. Kingdon, elected 1897. An obituary notice will appear in due course.

The PRESIDENT announced that His Holiness the Pope had presented to the Everest Expedition, 1922, a gold medal, which is for the present being exhibited at the Royal Geographical Society's building. It would be handed over for safe keeping to the Alpine Club very shortly.

Brig.-Gen. The Hon. C. G. BRUCE then read a Paper entitled 'Outline of the 1922 Everest Expedition,' which was illustrated by lantern slides.

After a few remarks by Lt.-Col. E. L. Strutt, C.B.E., D.S.O., and the President, a very hearty vote of thanks was accorded the reader of the Paper.

THE ANNUAL GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Monday, December 11, 1922, at 8.30 p.m., Professor J. Norman Collie, LL.D., F.R.S., *President*, in the Chair.

The following candidates were balloted for and elected Members of the Club, namely, Lieut.-Col. C. K. Howard-Bury, D.S.O., M.P., Mr. W. B. Carslake, Mr. Walter Meakin, Major J. H. Norton, Mr. D. R. Pye, Mr. M. E. S. Rudolf, Mr. H. E. Scott, Capt. Horace Westmorland, R.C.A.S.C.

The PRESIDENT, in accordance with the provisions of Rule 29, there being no other candidates, declared the following members nominated by the Committee to be duly elected as Officers of the Club and Members of Committee for 1923 :

As President.—Brig.-Gen. The Hon. C. G. Bruce, C.B., M.V.O., in the place of Professor J. Norman Collie, LL.D., F.R.S., whose term of office expires.

As Honorary Secretary.—Mr. Sydney Spencer in the place of Mr. J. E. C. Eaton, whose term of office expires.

As New Members of Committee.—Mr. R. S. Morrish, Mr. N. E. Odell, Mr. G. Sang, and Mr. P. J. H. Unna, in the places of Mr. R. P. Bicknell, Major M. G. Bradley, and Mr. E. V. Slater, whose term of office

expire, and Brig.-Gen. The Hon. C. G. Bruce, C.B., M.V.O., elected President.

It was proposed and seconded that Mr. Reginald Graham and Mr. J. T. Osler be elected Auditors to audit the Club Accounts for the current year. This was carried unanimously.

The PRESIDENT said :—I regret to announce the death of an old Member of the Club. Mr. J. E. P. Gage was elected in 1877. He died on August 26 last at Colac, Victoria, Australia, where he had been resident for many years past.

I have now to propose a vote of thanks to Mr. Sydney Spencer for his work in arranging the Exhibition of Paintings. This was duly seconded and carried unanimously.

Mr. G. A. SOLLY, *Vice-President*, proposed, and Sir EDWARD DAVIDSON, K.C.M.G., C.B., K.C., seconded, a vote of thanks to the retiring President, Professor J. Norman Collie, LL.D., F.R.S., for the work he had done for the Club during his term of office. This was carried with great acclamation.

Mr. H. E. M. STUTFIELD and Mr. R. BICKNELL proposed and seconded a vote of thanks to the retiring Honorary Secretary, Mr. J. E. C. Eaton, which was received with enthusiasm.

The PRESIDENT then delivered a valedictory address.

A MEMORIAL EXHIBITION OF ALPINE PAINTINGS by the late E. T. Compton and other artists was held in the Hall of the Club from Monday, December 11, to Saturday, December 30, 1922. In connexion with the Exhibition an 'At Home' was held on Tuesday, December 12, when about 500 persons—Members and their friends—attended.

THE ANNUAL WINTER DINNER was held in the Edward VII Rooms at the Hotel Victoria on Tuesday, December 12, 1922, at 7 p.m., Professor J. Norman Collie, LL.D., F.R.S., *President*, in the Chair. There were present 248 Members and guests, among the latter being The Rt. Hon. The Earl of Ronaldshay, G.C.I.E., His Excellency Monsieur C. R. Paravicini, Swiss Minister, General le Vicomte de la Panouse, K.C.M.G., C.B., C.V.O., The Rt. Hon. Sir Laming Worthington Evans, Bt., G.B.E., M.P., Sir William Bragg, Mr. Arthur R. Hinks, C.B.E., F.R.S., and Messrs. Raymond Greene and L. Ashcroft Ellwood, Presidents of the Oxford and Cambridge University Mountaineering Clubs respectively.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Tuesday, February 6, 1923, at 8.30 p.m., Brig.-Gen. The Hon. C. G. Bruce, C.B., M.V.O., *President*, in the Chair.

The following candidates were balloted for and elected Members of the Club, namely, Mr. Claud Francis Fothergill, Mr. Archibald Rawlings Painter, and Mr. K. C. P. Struve.

DR. CLAUDE WILSON, *Vice-President*, announced that the President

and Col. E. L. Strutt, C.B.E., D.S.O., were presented with the gold and silver medals respectively of the Société de Géographie and the Club Alpin Français on the occasion of their recent visit to the Sorbonne in Paris to deliver a lecture on the Everest Expedition, 1922, to the Members of those Societies, and that both had expressed a desire to present these medals to the Club. He (Dr. Wilson) was quite sure that the presentation of these medals would be highly appreciated by the Members, and he desired to propose a very cordial vote of thanks to the President and Col. Strutt for their gifts. This proposal was seconded by Mr. G. A. Solly and carried with acclamation.

In order to comply with the provisions of Section 13 of the Licensing Act, 1921, concerning the sale of intoxicants on licensed premises, the following additional Rule was proposed by Sir Felix Schuster, Bt., namely :—

‘Rule 47. Intoxicants will be on sale at General and Informal Meetings of the Club only between the hours of 8.30 P.M. and 11 P.M.’

This was seconded by Mr. R. W. Lloyd and carried *nem. con.*

The Rev. Prebendary HEARD then read a Paper entitled ‘The North-West Ridge and Traverse of the Mönch,’ which was illustrated by lantern slides.

A discussion followed, in which Mr. Claude A. Macdonald, The Rev. Walter Weston, Mr. H. G. Willink, Sir Edward Davidson, K.C.M.G., C.B., K.C., Dr. T. G. Longstaff, and Mr. G. A. Solly took part, and the proceedings terminated with a very cordial vote of thanks to the reader of the Paper.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Tuesday, March 6, 1923, at 8.30 P.M., Mr. G. A. Solly, *Vice-President*, in the Chair.

The following candidates were balloted for and elected Members of the Club, namely, Mr. Harry Joslin Gait and Mr. James M. Wordie.

The HONORARY SECRETARY and TREASURER, Mr. Sydney Spencer, presented the Accounts of the Club for 1922, and pointed out that the cost of the ALPINE JOURNAL had, in pursuance of an undertaking given by Captain Farrar in March last year, been reduced from £586 to £403, and that this reduction accounted for a considerable portion of the surplus shown in the present Accounts. The Accounts were unanimously adopted.

The Auditors, Mr. Reginald Graham and Mr. J. T. Osler, were accorded a hearty vote of thanks for their work in connexion with the Audit.

The CHAIRMAN informed the Club that a new lease of the Club premises had now been completed and signed by the President, Brig.-Gen. The Hon. C. G. Bruce, C.B., M.V.O., and Mr. John J. Withers, C.B.E., on behalf of the Club, and that the Committee had passed a resolution indemnifying the signatories to the new lease against all claims under the lease. He (the Chairman) was sure

the Club would wish to give expression to their appreciation of the work done in this connexion by Professor J. Norman Collie, Mr. E. H. F. Bradby, Mr. John J. Withers, C.B.E., Mr. R. W. Lloyd, and Mr. J. E. C. Eaton, and he proposed a vote of thanks to them. This was received with enthusiasm.

Reference was made to the death of Mr. E. R. Whitwell, elected in 1868, which occurred in October last. An obituary notice will be published in due course.

Mr. W. N. LING then read a Paper entitled 'The N. Face of the Disgrazia and other climbs in 1910,' which was illustrated by lantern slides. A discussion followed in which Dr. Claude Wilson and others took part, and a unanimous vote of thanks to the reader of the Paper terminated the proceedings.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Tuesday, April 10, 1923, at 8.30 P.M., Brig.-Gen. The Hon. C. G. Bruce, C.B., M.V.O., *President*, in the Chair.

The following candidates were balloted for and elected Members of the Club, namely, Mr. Leslie Ashcroft Ellwood and Mr. Kenneth Harry Tallerman.

The PRESIDENT announced that the Mount Everest Committee had requested the Committee to appoint a Selection Sub-Committee in connexion with the next Mount Everest Expedition, and that the following Members had been appointed to serve on this Sub-Committee, namely, Mr. G. A. Solly, Vice-President, Mr. G. L. Mallory, Mr. N. E. Odell, Mr. G. Sang, Lt.-Col. E. L. Strutt, C.B.E., D.S.O., Dr. T. G. Longstaff, Mr. R. P. Bicknell, and Mr. W. M. Roberts, the Members of the A.C. at present serving on the Mount Everest Committee to be Members of the Sub-Committee *ex officio*. These are: Brig.-Gen. The Hon. C. G. Bruce, C.B., M.V.O., President, Professor J. Norman Collie, LL.D., F.R.S., Capt. J. P. Farrar, D.S.O., and Mr. Sydney Spencer, Hon. Secretary. Members would be cordially invited to send in the names of any mountaineers whom they deemed suitable for the climbing party on the next Expedition, which, it was expected, would take place next year, and a notice to this effect would be sent out in the next secretarial circular.

The PRESIDENT also announced that, with regard to the Winter Dinner in December next, the Committee recommended that the price of the Dinner Tickets should be raised to 30s. each in order that champagne might be served. He desired to obtain the views of the Club on this subject. No definite views were expressed, but the general sense of the meeting was that the recommendation of the Committee would meet the wishes of the majority.

Mr. P. C. VISSER then read a Paper on the 'Karakoram Himalayas,' which was illustrated by lantern slides. Discussion followed, in which Dr. T. G. Longstaff and the President took part, and the proceedings terminated with a cordial vote of thanks to Mr. Visser.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile

Row, London, W. 1, on Tuesday, May 1, 1923, at 8.30 P.M., Brig.-Gen. The Hon. C. G. Bruce, C.B., M.V.O., *President*, in the Chair.

The following candidate was balloted for and elected a Member of the Club, namely, Mr. Henry Ronald Williams.

The PRESIDENT announced with regret the recent deaths of Mr. F. L. Latham, an old Member of the Club, elected in 1862, and Mr. J. T. Osler, elected in 1903, one of the Club's Auditors, who was well known to a good many members.

The Regulations with regard to the Annual Winter Dinner were brought before the Meeting for approval. Regulation No. 8, suggesting that the price of the Dinner Tickets be raised to £1 11s. so that champagne might be served, was discussed, and Mr. H. V. Reade, C.B., proposed, and Mr. G. P. Baker seconded, an amendment that the price of the Dinner Tickets should be the same as last year, namely, £1 2s. After some further discussion the amendment was put to the vote and carried by a large majority.

The PRESIDENT announced that Sir Felix Schuster had had audience of the Pope in Rome, who had charged him with a message of good-will, and an expression of sympathy with the Club in all its undertakings. The Pope desired that his regards should be conveyed to all Members of the Club, with particular reference to Mr. D. W. Freshfield and the President.

Also, that a letter had been received from Cardinal Gasparri, Secretary of State to the Pope, thanking the Club for the Portfolio of Mount Everest Photographs which had been sent to the Pope in the name of the Club, and handed to him by Mr. Freshfield.

Mr. A. P. HARPER, President of the New Zealand Alpine Club, then gave a description of work in the Southern Alps of New Zealand, illustrated by lantern slides.

Appreciation of the work done by Mr. Harper, and of the charm of New Zealand and its people was voiced by Mr. A. L. Mumm, Mr. Claude A. Macdonald, Sir James Allen (High Commissioner for New Zealand), and the President, and the proceedings closed with a cordial vote of thanks to Mr. Harper.

ADDENDA AND CORRIGENDA.

Vol. xxxiv. p. 389, line 4 from bottom, *for* '10495' *read* '10945.'

P. 392, par. 3, line 8, *for* 'Mt. Barnard' *read* 'Mt. Freshfield.'

NOTE.

The map of the Freshfield group, the copies of which Dr. Deville, the Surveyor-General of Canada, has been so good as to present to the JOURNAL, is to accompany Dr. Monroe Thorington's paper in vol. xxxiv., and should be bound with that volume.

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"Mountain (grand-) sires, on mountain standing."

W. CECIL SLINGSBY (æ. 74) and SIR GEORGE YOUNG (æ. 86)
ON THE LANGDALE PIKES, AUGUST, 1923.

(The same day three generations of the Young-Slingsby family
ascended Dungeon Ghyll.)

THE
ALPINE JOURNAL.

NOVEMBER 1923.

(No. 227.)

A MESSAGE.

[In the assurance that the Club will welcome news of its sometime President, the Right Rev. Bishop G. F. Browne, now in his ninety-first year, this letter, by his kind permission, is here reproduced.]

My dear Father,

Any thing from the
Alpine Club, and especially
from me in your position,
naturally stirs
memories of great favours
conferred upon me. The
memories are full and
warm. But they do not

include anything that
would help you in your
research for early details
of "Ser Davidson's" climbs.
I am very sorry it is so.

I have always been
glad that I determined
when I was President to
disregard the feud which
had caused his practical
disappearance from the
councils of the Club, and thus
led to his Vice Presidency
and Presidency.

In 1907 he obtained for me the use of the beautiful suite of rooms in the Inner Temple for the Jubilee Reception which my daughters and I held on the night after the Jubilee Dinner in the Hall of Lincoln's Inn, obtained for me by Dick Webster.

Yes, thank you, I am well, and for my 90 years active. I am just back from two months with friends in the north parts of Scotland. In 1921 and 1922 I published a three guinea and a two guinea book on Scottish Antiquities and a Scottish Charter Chest, signing the preface of my nineteenth book on my nineteenth birthday last year. The publishers say

that is unique. I reply
 "see what it is to have
 lived on alpine air
 in body and soul."

Yours ever sincerely

G. F. Browne

2 Camden Street Road
 W8

6 Oct. '23

TRAVEL MEMORIES.

By WM. H. WINTERBOTHAM

(formerly a Member of the Alpine Club).

ANTIQUITY sometimes gives an interest to accounts of mountain climbing which are in themselves commonplace, and I think this will account for my having been asked in my old age to put on record by an article in the ALPINE JOURNAL some account of my early mountaineering.

It was in 1858 that my elder brother took his two younger brothers for a trip to the Pyrenees. As it was my first visit to

the Continent I have a very lively recollection of every trifling incident of the journey and of every day's walk. I was then a schoolboy of fourteen. The journey *via* Paris and Bordeaux as far as Dax was made very much as at present. From Dax we had a diligence drive of 52 miles to Pau. Our first day's walk was from Pau to Eaux Chaudes, on the high road all the way. I am disposed to think that 27 miles was not a bad beginning for a boy of my age who had had no previous training. July, in the South of France, I found fairly hot and I carried a knapsack most of the way. Our first Sunday was spent at Eaux Bonnes, and it was the occasion of the Summer sports, when the Basque inhabitants of the Val d'Ossau turn up in holiday costume, the men in scarlet jackets and knee-breeches and the women in equally bright costumes. Between the games they joined hands and danced in a circle to the music of two old blind musicians.

We started on Monday morning for the Baths of Panticosa, on the Spanish side of the Chain, with a local guide named Camy. My recollection of him is that he had only one eye and was very fond of stopping for a drink, holding the wine-skin about 12 inches above his head with both hands and swallowing thus in a comparatively short space of time in an uninterrupted flow a considerable quantity of liquor. The pass is comparatively low, but the heat on the S. side was intense and without any shade, and there is at least 6 hours' steady walking after reaching the Col. On the following day, keeping on the Spanish side, we walked to Torla, and on the Wednesday we crossed to Gavarnie by the Port of that name, walking down to Luz on the following day. There we parted with Camy, and spent the Friday in a drive down the Valley to Argelès, walking back to Luz in the afternoon. It was a curious coincidence that the date of our visit to Argelès coincided with that of the alleged first visit of the Virgin Mary to Lourdes, 7 miles lower down the valley. On the Saturday we walked by Barèges to Bagnères-de-Bigorre by the Col de Tourmalet, which I see is 29 miles on the high road, the Col being about 7000 ft. high. After a day's rest at Bagnères-de-Bigorre we walked on Monday to Arreau by the Hourquette d'Aspin (about 23 miles), and on the next day by the Col de Peyresourde to Bagnères du Luchon, with a digression to the Lac d'Oô. After a few days at Luchon we took the diligence to Toulouse, a distance of 70 miles, where we again joined the railway and returned to England *via* Nîmes, Avignon, Lyons and Paris.

I remember that when leaving Luchon we ran short of money,

and after booking our places in the diligence and paying our hotel bill (which was larger than we anticipated) we could only muster a franc and a half between us. As, however, we were expecting a remittance from home at the Poste Restante at Toulouse, we were not troubled about our impecunious condition until we recollected that our washing bill had not been charged. Having regard, however, to the charges in the hotel bill our consciences did not prick us, but we took a somewhat hasty departure and got into the banquette of the diligence half an hour before it started, hoping that the 'Boots' would not follow us with the unpaid bill. We left Luchon in due course without discovery and spent our remaining funds in buying pears *en route*, and fell asleep, to wake up at 3 A.M. in the yard of an hotel at Toulouse where we had been left in the empty diligence by driver, conductor, fellow travellers and horses! Having climbed down we got into the hotel and finished our night's rest there, and in due course called for letters at the Poste Restante. There, sure enough, was the expected letter, but my father, under the impression that if the postage was unpaid the authorities would take better care of the letter, had not stamped it, and we had not the wherewithal to pay the amount. In vain my brother offered to pledge his watch in satisfaction. We had to return to the hotel and explain the position to the landlord. It says something for the confidence which people in France had in those days in the honesty of Englishmen—possibly our youth proclaimed our innocence of fraud—that our host no sooner grasped the situation than he threw open the safe which stood by his table, took out a rouleau of gold coins and scattered them on the table, telling us to take what we wanted. With many thanks my brother selected a five-franc piece, redeemed the letter, and so our troubles ended. I feel bound, however, to confess that, to the best of my recollection, the washing bill remains unpaid to this day. I hope it was the proprietor of the hotel and not the laundress who suffered.

Looking back on this first visit to the mountains, I confess to being rather proud of my walking powers. July in the South of France and on the Spanish side of the Chain is a pretty hot month and much of our walking was on the high road. I was not by any means an athletic boy at fourteen, and I had had no serious physical training at school. Moreover, on the Spanish side the sleeping and feeding arrangements were very poor.

I have paid many visits to the Pyrenees since 1858, and there

are not many mountains in the Chain I have not climbed, starting from the Grand Rhune near the Atlantic, famous in the Peninsular War, and ending with the Canigou overlooking the Mediterranean coast. There is good rock-climbing in parts, but the snow and ice have to be looked for. Having regard to the height of the main chain (the highest mountains being only just over 11,000 ft.), the Cols in the central part of the range are high, and I believe there are still no high roads crossing this part of the Chain. The scenery, in my judgment, will take a lot to beat it, and some of the valleys—for example the Eaux Chaudes valley, the valleys from Pierrefitte to Cauterets and to St. Sauveur and Gavarnie, and the valleys on the Spanish side S. of Gavarnie—are exceedingly beautiful. Nothing could be more delightful than a week I spent at Garvarnie in 1874 with my friend Roger Gaskell. With Henri Passet as our guide we climbed the Vignemale, Mont Perdu, the Cylindre, the Pic de Marboré, the Taillon and the Pic de la Munia—all between 10,000 and 11,000 ft. high. We rarely spent a day in the mountains without coming across large herds of Izards, and on the Pic des Posets we came upon one within a few yards—asleep, I fancy!

The Balaïtous is quoted in the guide-books as a mountain on which the rock-climbing is difficult, but I do not think it is so if you find the right way up. I climbed it in 1874 with Orteig, a well-known local guide, and my note made at the time was: ‘Not a hard mountain, although the final arête requires a guide who knows the rocks.’ I also made the following sensational extract from a French guide-book about the ascent: ‘Impossible ici de donner conseil. Un grand instinct peut seul tirer de ce lieu diabolique; enfer de rochers où l’on risque un instant sa vie! Bientôt la crête s’amincit, se change en roc vif, en obélisques disloqués et chancelants prêts à rouler dans les deux abîmes qui flanquent la montagne au Nord et au Sud.’

The hotel accommodation on the Spanish side hardly deserves the name, and, apart from the character and quality of the food, some of the places in which we had to sleep swarmed with vermin. I have no reason to believe that matters have improved since my last visit. The accommodation on the French side is excellent, though probably much dearer now than it was.

My first visit to the Alps was in 1867. My muscles were then pretty well trained by hard rowing at Cambridge. I went straight to Chamonix, and, knowing no guide even by name,

I was fortunate enough to have François Dévouassoud assigned to me, and after a preliminary excursion to the Jardin we walked up to the Grands Mulets. He there persuaded me to join a party who were ascending Mont Blanc on the following day. We started at 2 A.M., but did not reach the top until 1 P.M., after eleven hours' tramp, mostly through soft snow which had fallen a few days before. We were a party of six, including two guides and two porters, who, of course, did the severe work of making the trail. We followed the old route by the Corridor and the Mur de la Côte. In ascending the Corridor we were not infrequently up to our hips in soft snow. My companion was about done when we reached the easy slopes above the Mur de la Côte, and we there broke into two parties and I pushed on with François and my porter. I was somewhat exhausted when I reached the top, but more I think from the lower air-pressure than from the exertion. We spent an hour on the top, being joined there by the rest of the party. The day was cloudless and without wind. A thermometer hung on an ice-axe registered 22° in the shade and 70° in the sun. We came down at a good pace, but, being anxious to meet my friends at Chamonix that night, we left my companion and his guide to sleep at the Grands Mulets, and, pushing on, just got off the glacier by sunset, stumbled through the pinewoods in the dark, and turned up at the hotel at about 10 P.M. unexpectedly, as they had seen a light at the Grands Mulets hut and assumed we were staying there the night. I remember that, anxious to show my friends that I was 'quite fresh' after my 20 hours' expedition, I put a chair in the middle of the room and jumped over the back in my heavy nailed boots. My face, however, was a sight, as I had worn no linen mask, relying only on dark spectacles to protect the eyes.

I must be forgiven for again referring, with some personal satisfaction in my old age, to that day's walk. Allowing for some rests and the hour on the top, I had been 20 hours on the go, largely through soft snow, and I had had no previous experience in snow and ice walking.

I walked on the following day to Martigny, and after spending the Sunday at Glion we started for Zermatt on the Monday. François again joined us at Martigny and conducted us over the Col d'Hérens to Zermatt, but we did no other snow-walking that year. In the following year, however, with an old Cambridge friend, William Winter, I met François by arrangement at Sixt, and taking a nephew of his with us as porter we crossed

the Col du Géant to Courmayeur, drove on the following day down to Villeneuve and walked up the Val Savaranche to Pont, and thence up to the Chalets de Moncorvé on the slope of the Grand Paradis, ascending that mountain on the following day and returning to Aosta for the night. Thence crossing two of the southern spurs of the main chain, we slept at a chalet at the foot of the Lys Glacier above Gressoney, and starting at 2 A.M. on the following morning we crossed the Felikjoch to the Riffel. This is an exceedingly fine expedition. We started in fog and climbed the W. side of the valley for some 2 or 3 hours without seeing a yard in front of us. Then suddenly we put our heads through a level sheet of mist, to find ourselves with a horizon extending in some directions 100 miles, and the entire range glowing in the early morning light. The Col is some 13,400 ft. high and the glacier on the N. side is very steep and much crevassed in parts, but François steered us successfully through these difficulties.

After a day's rest we started to ascend the Cima de Jazzi *via* the Weissthor, but François was anxious to get me up Monte Rosa, and at the parting of the ways I left Winter with the porter to ascend the Cima de Jazzi with half the rope and I went with François for Mte. Rosa, hurrying to join a party who were in front of us. Unfortunately I had told them the night before at the hotel that a somewhat disagreeable Englishman had expressed a wish to find someone ascending the mountain to whom he could attach himself, and assuming I was the party in question they did their best to keep ahead of us. However, they were unsuccessful in this, and when we got within hail they were good enough to explain that they had made a mistake and that I was not the party in question, and François they recognised as a distinct acquisition. We had a successful ascent and returned to the Riffel in about 14 hours. I was, however, again unfortunate in the state of the snow, which on the ice slope below the arête was in a decidedly unpleasant condition, and I am bound to confess that this part of the climb was to me the most trying of any I have attempted.

I had another trip with François a few years later, when we started from the Belalp and crossed the Beichgrat to Ried. From Ried we crossed the Lötschenlücke, making for the Eggishorn hotel, but finding ourselves well in advance of our time we pushed on for the Belalp. Unfortunately we tried to cross to the N. side of the Glacier too high up, and found the séracs so awkward that after wandering among them for

two hours we had to retrace our steps and get on to the rocks just where we had left them. We then had a scramble down the Moraine until we got to the usual crossing-place, and then we had to ascend some 1500 ft. in the dark to the hotel. I admit that I arrived after that day's walk in a somewhat exhausted condition.

I have paid a good many other visits to the Alps and have done some other climbing, but none I think of any special interest. One year I took what is, I think, known as the high-level route from Chamonix to Zermatt and on over the Weissthor to Macugnaga with Henri Dévouassoud, a brother of François, and I have made other expeditions at Pontresina and in the Adamello group and at Cortina; but my later visits have been largely to the Pyrenees and to Corsica, to which island I became very much attached as a spring and early autumn resort when my walking powers were less.

I must add to this somewhat 'rambling' article a word or two about dear old François. He was a delightful guide and companion—a man to whom one became really attached. I recall his serious, almost solemn, face when dealing with a difficult spot. He did not take mountaineering lightly. I recall, as an instance, that, when coming down the N. side of the Felikjoch, we had to descend a very broken and rather steep bit of glacier well above the snow-line, and we came to a place where two wide crevasses met at right angles, and the meeting-place was the only place at which we could get over. The slope down to the crossing-place was distinctly steep and the level of the glacier on the other side was some feet higher. We were a party of four. François cut steps down to the edge, where he cut out a flat place large enough to sit upon, and, after satisfying himself by a glance behind him that we had allowed him rope enough, he sat down upon the place he had cut out with his legs hanging over the edge. He then cut out a step or two on the other side (which was almost perpendicular), drove his axe firmly into the hard névé opposite and above him, and climbed up like a cat. Once on the other side he was secure and able to hold us in case of a slip on our part as we cautiously followed in his footsteps. It was on the same expedition that I made the acquaintance of the two perpendicular ice-walls of a crevasse. My friend who was next behind me had somewhat thoughtlessly allowed me too much rope while crossing an easy piece of névé, and the snow suddenly gave way and I fell through, only being brought up by François, who was in front of me. I remember well as I looked up to the sky through the round

hole I had made in the snow in my fall seeing it obscured by François' serious but welcome face. My ice-axe had in my fall been wedged across it, and had I stuck to it as I should have done I might have held on and probably have extricated myself.

Again, when ascending the Grand Paradis, he seemed to me to spend an unnecessary amount of time and labour in cutting big steps in the final slope, but, as he pointed out to me, we should have to climb down this same slope later in the day after a hot sun had been upon it, and it would not be easy to improve the steps then, whereas the steps he had made would last all day.

Let me add here one word about climbing without guides. When I have taken on a job which requires skill and experience which I do not possess (whether it be mountaineering or the more serious work of life), I prefer to rely on a man who has that skill and experience to show me how to do it. I am enjoying sailing in my old age, but, having secured a thoroughly good boat, I employ a skilled sailor to sail it with me. In sailing as in mountaineering the unexpected happens, and I feel no pleasure in facing that contingency unaided. One's life is not given one to play with, and, after all, mountaineering and sailing are for us pleasure, not business.

I always connect François with a phrase which I have often used since, applying it to more serious business than climbing mountains, and I recall that when François first used to us that phrase, my companion, a distinguished physician, quoted it in his inaugural address to the students at Guy's Hospital at the autumn session of the year. When starting a long climb François' motto was, '*L'oucement mais toujours.*' It seems to me to be an excellent motto for those who try to *rush* a serious job and then have to pull up in the middle or get tired of their task before it is finished. We had an excellent illustration of the application of his maxim to mountaineering when ascending the Aletschhorn from the Belalp. François suggested to me the night before that we should ask an English tourist at the hotel to join us, not so much for the sake of his company but because he had a very reliable guide, and the three forming our party had only François and an untried porter. Having arranged this, we found our new companion very dissatisfied with our pace up the glacier before we reached the more serious part of the ascent, and in particular he grumbled because at the foot of the somewhat long and fairly steep snow slopes at the head of the glacier we pulled up for a second breakfast.

However, we concealed our annoyance at his criticism, and roping the party we started up the snow slopes 'doucement mais toujours.' When we had been going about an hour I felt the rope behind me tightening rather frequently, but I took no notice of it and pulled on steadily until I heard a somewhat gasping voice behind me, 'Could we not pull up for a little rest?' 'Oh, of course,' I replied, 'if you are tired, but I thought we were going too slowly for you.' This went on at intervals for the next 3 or 4 hours, by which time I felt we had had our revenge. Coming down he certainly did not carry out François' maxim, as he nearly pulled the whole party off their legs, and would have done so, I think, but for François' steady hold as last man.

When François paid a visit to England he dined and spent an evening with me. He told me that he did not find his way about London very easily. When it was clear he managed to guide himself pretty well by the stars! but it was generally cloudy, and then he got into difficulties. He paid a visit to a distinguished Don at Trinity College, Cambridge, with whom he had climbed. He told me that he was followed suspiciously by the porter, who, finding him peering about the foot of the staircases, asked him his business; but when he mentioned the name of the gentleman whose rooms he was seeking, he was treated with the greatest deference and conducted to the right door.

Not a small share of the very pleasant memories that I carry into my old age of my mountain climbs is due to old François. I cannot recall ever hearing him laugh, though I suppose he did so at times; but I do recall his warm greetings, his uniform good-nature and pleasantness, and the admirable way in which he did his work.

I last saw him in September 1904, when he came up to visit me at the Col des Montets, where I was staying with my family, and we were photographed together. That photograph I am sorry to say I have lost, though an earlier one taken at Chamonix in 1869 I think I still have. We parted at Chamonix station when I was returning home, and I can never forget the warmth of his sympathy, for I had just returned from the Val Savaranche, where I had been to bury a son who, with three companions, was killed on the Grand Paradis climbing without guides!

THE EARLY SWISS PIONEERS OF THE ALPS.

BY DR. H. DÜBL.

(Continued from Vol. xxxiii. p. 366.)

FATHER PLACIDUS A SPESCHA (1752–1833).

WE can now do ample justice to this remarkable precursor of modern Alpine exploration and investigation, as his biography has recently been written and most of his literary work published by three of his fellow-countrymen.¹ While referring my readers who may desire further details to this work and to the review of it published in this JOURNAL,² I shall endeavour to portray the man and his deeds as far as his mountaineering career is concerned.

Placidus Spescha (as he spells his name) was born on December 9, 1752, at Truns, and was the son of well-to-do peasants. His parents gave him a liberal education, first at Coire, whence he followed his tutor, the bishop's chaplain, in 1770 to Mals and Tartsch in the Vintschgau. In 1772 he returned to become a pupil in the monastery of Disentis. In 1774 we find him a novice and soon afterwards a conventual in the same house of Benedictines. In 1776 he was sent with other monks of Disentis to Einsiedeln, where he derived much profit in his theological studies from the excellent teachers there, and even more in those of history and natural science. He returned to Disentis in 1780, and the same year was appointed chaplain to the hospital of St. John, on the Lucmanier Pass. Here he began at once the memorable work of his life, climbing, travelling, mapping, collecting plants and minerals, noting facts and observations in natural history, drawing mountain prospects and outline sketches. In a few years he attained a wide reputation as a capable naturalist and mountaineer. Among his correspondents and visitors at the Monastery of Disentis, at which Spescha was librarian

¹ *Pater. Placidus a Spescha, sein. Leben. und seine Schriften*, herausgegeben von Prof. Dr. Friedrich Pieth, Chur, und Prof. Dr. P. Karl Hager, Disentis, mit einem Anhang von P. Maurus Carnot, Disentis. Bern, 1913.

² *A.J.* xxviii. 346–7.

and bursar, we find such well-known men as Pol, Meiners, Ebel, Wytenbach, and Dalberg. And, as we shall see, he frequently acted as guide to the foreigners who came to climb the mountains in the neighbourhood of Disentis. This useful and pleasant life met with sad interruption during the Revolution and the alternate invasions by French and Austrian troops in 1798 and 1799. Spescha saw his monastery sacked and burnt, his collections of manuscripts, maps and books either damaged or destroyed, while he was seized and sent to Innsbruck as a hostage. He remained there from September 6, 1799, to February 2, 1801, whiling away his exile by continuing his studies in the Academy of Innsbruck, travelling in the neighbourhood of that picturesque city, climbing the Patscherkofel and the Rosskopf, visiting the mines of Schwaz and Hall, describing these travels in the most lively manner, and composing the first manual for mountaineers of which we know since the publication of Josias Simler's classical chapters. After his return to Disentis, Spescha's career presents a series of trials and tribulations, which were due not only to the unjust persecutions on the part of his religious colleagues, but also to his somewhat irascible and irritating temperament. We cannot enter into these details here, but it will suffice to say that he subsequently held livings, chaplaincies or curacies in Romein, Somvix, Vals, Pleiv, Caverdiras (near Disentis), Selva, Tschamut (narrowly escaping death in the great avalanche which nearly destroyed the latter hamlet on December 31, 1809), and Sedrun, but never remaining long in the same place and frequently scandalizing his spiritual authorities or his pious flock by strolling away from his ecclesiastical duties to make a new ascent or even a long Alpine tour, which on one occasion led him as far as the Aar glacier. Indeed, this second period of his Alpine career, extending from 1801 to 1817, was nearly as fruitful in climbs and literary work as the first. In 1817 he abandoned his peregrinations for the somewhat sedentary post of chaplain at Truns, where he died on August 14, 1838, at the great age of 81 years. Even during the last two decades of his life, when a sort of confinement in the custody of a colleague who had acted very badly towards him in 1799 much limited his activities, Spescha did not abandon his Alpine explorations. His last climb was an attempt to reach the summit of the Piz Rusein on September 1, 1824, when his companions, the chamois-hunters Placidus Curschallas of Truns and Augustin Bisquolm of Disentis, alone attained the summit, Spescha and his servant, Carli Cagenard, having halted

on an elevated spot on the right bank of the Rusein Valley, probably between Culm Gietschen and Catscharauls, from which they watched the ascent and descent of their two companions. His last Alpine publication was an unsigned article in the *Intelligenz-Blatt*, of Coire, No. 48, dated November 30, 1824, and entitled 'Die Ersteigung des Piz Rusein.' In addition to this he also sent at the time a note about the expedition to Dr. J. Hegetschweiler, who had attempted the Tödi from the E. in 1822. Spescha's detailed records of the expedition are published in the original by Father Karl Hager, with an introduction and notes.³ There cannot be the slightest doubt that Curschallas and Bisquolm really reached Point 3623, the highest summit of the Tödi group. Spescha continued noting down facts and drawing maps of Alpine interest until 1830, when his trembling hand refused to hold pen or pencil.

In summing up the really marvellous Alpine work of Father Placidus, it will be better to divide it topographically rather than to arrange it in chronological order. I give below Spescha's original denominations as well as those now used officially, adding wherever possible the dates and the names of his companions and only such details as appear indispensable. For further information regarding his Alpine career, I must refer the reader to his biography, in which nearly all of his great climbs are described by himself.

(a) In the neighbourhood of the Lucmanier and the St. Gotthard :

1. Pozetta = Piz Cristallina, 3128 m., in the Medels valley, 1782.

2. Muraun, 2899 m., probably also in 1782 and again between 1812 and 1819.

3. Scopi, 3200 m., in 1782 with Johann Bagliel, 'einem erfahrenen Bergmann'; in 1790 alone; on July 30, 1814, with Baron Anton von Harthausen (near Darmstadt) in deep snow.

4. Serengia = Piz del Ufiern, 3017 m., in Val Nalps, with the servant Andreas Lei of the Zillertal in 1785. Spescha compared with a level the respective heights of the Finsteraarhorn and the Piz Rusein, and found that the former must be the higher. He also saw Mont Blanc.

5. Badus, 2931 m., in August 1785; again on September 3, 1810 (in three hours from Tschamut to the Lake of Toma, and two hours thence to the summit); and the last time

³ *Pater Placidus a Spescha*, etc., pp. 360-7.

about 1812, with Father Fintan Bürchler of the monastery of Rhinau, whose principal aim was to see the source of the Rhine and who remained behind at the foot of the final summit, refusing Spescha's offer to carry him up on his shoulders !

6. In 1791 (probably) Spescha availed himself of the position he held as bursar of his monastery to recite a mass on the day of the Assumption of the Virgin (August 15) at Santa Maria on the Lucmanier. To go to that spot, distant only four hours from Disentis, he chose a roundabout route, which took him fourteen hours of actual walking. Accompanied by a hunter and a servant from the monastery, he left Disentis on August 14, at 2 A.M., went by Sedrun and Tschamut and through Val Maigels to the spot where the sources of the Rhine and the Reuss closely approach each other, thence by a saddle to the highest huts in the Sella valley, and back by Val Cadlimo to Santa Maria.

7. In 1810, on August 30, Spescha started from Selva at 8.30 A.M., with his servant Gion B. Candinas, on an exploring tour, and arrived at Airolo by Val Maigels and Val Canaria at 5 P.M. The next day he made an excursion into the Val Bedretto, in order to explore the passes leading to the Valais and Val Formazza. He returned to Airolo and recrossed on September 1 by the Sella valley and Pass to Val Maigels and Selva, arriving at the latter place at 10 P.M.

(b) In the Adula Alps :

8. Valrhein or Lentahorn = Rheinwaldhorn, 3398 m., in July 1789. Spescha alone reached the summit, his companions, Drs. Rengger of Berne, Ackermann of Mainz, and Domeyer of Hanover, and even the guide, a shepherd named Antonio, from the Zapportalp, remaining some distance behind.

9. Piz d'il Draus or Piz Ramosa = Piz Cavel, 2944 m., in Val Lugnez, in August 1799, about a week before his arrest. While on the summit he heard the gunfire of the Austrian and French troops in the Urseren valley.

10. Piz Valölia = Piz Aul, 3124 m., in Val Lugnez, with the shepherd Lorenz Peder Smet from Alp Surrhein, on August 18, 1801. He remained three hours on the top, drawing a panorama, on which he names the ' Briemontres ' (?), Monte Rosa, Mont Blanc, Finsteraarhorn, Schreckhorn, Rusein, Tödi, Urlaun, Güverhorn, and Valrhein.

11. Derlun = Piz Scherboden, 3124 m., first in 1801 with Domenico Casanova, the tenant of the Alp Scherboden, and his young son. The latter trembled so much that they were obliged to retreat before the goal was quite reached ; and

again with better men in 1808, when he succeeded in making a complete ascent.

12. Piz Terri, also called Terri de Canal or Puncion de Gûda, 3151 m., in 1801 or 1802. His companion, a young lad, refused to follow him on the last bit between the trigonometrical signal of to-day and the higher point, and turned aside, so as not to see Spescha pass a deep cleft in the arête and clamber up the final tower. Doubts have been expressed as to this ascent and as to Spescha's route (see 'Climbers' Guide to the Adula Alps,' pp. 73-74), but a careful examination of Spescha's original records by W. Derichsweiler in the *S.A.C.J.*, xlvii. pp. 141-147, has finally settled the matter in his favour.

13. Guver = Güferhorn, 3393 m., with the chamois-hunter Jörg Anton Schmidt in 1806. Spescha acknowledges the boldness of his guide.

14. Surcombras, also called Damilhorn, Piz Raschuna or Piz Tamil = Weissenstein, 2949 m., in the Savien valley, about 1807.

15. In order to facilitate the construction of a carriage road over the Greina Pass, Spescha undertook to explore and describe four routes through that district, one from Vrin in Val Lugnez by the Disruet Pass, a second from Campo Chirone by the valleys of Luzzzone and Monterascio, a third from Campo by Val Ursära and Valle Camadra-Gaglianera, a fourth from Surrhein in the Surselva valley through the 'Tenigerthal' or Val Somvix. The last of these expeditions was made in 1820, from August 7 to 13. On this occasion he was benighted, and forced to bivouac at a height of 2414 m., on the grass near the snow. He was then sixty-eight years of age!

(c) Near the Oberalp and in the Tödi district:

16. Piz Aul = Piz Ault, 3033 m., in the Tavetsch valley. Spescha ascended this mountain three times: first alone some time before 1770, a second time with Herr Karl Witte, from Saxony, in July 1792, and again before 1799 with another monk, when the bad condition of the snow forced them to retreat before the summit was quite attained.

17. Piz Cötschen = Piz Tgetschen or Oberalpstock, 3330 m. Spescha made the first ascent of this peak in August 1792 with a young servant of the monastery, Joseph Sennonner, of Gröden in the Tyrol. They employed 'alpenstocks' and 'fusseisen' and a rope, and gained the summit from Alp Run (one hour and a half above Disentis) in about eight hours. With his level he ascertained that the Oberalpstock was higher than the Titlis. During the descent they started an avalanche

and were nearly swept away by it. Spescha repeated this ascent twice; on August 11, 1812, with the pastor Joseph Hitz and a goatherd from Sedrun, and three days later with a boy of twelve years from the Alp Strim, without a rope, but accompanied by Spescha's little dog, which tried in vain to save a stick the boy had dropped in a crevasse.

18. Denter Glatschärs or 'höchster Gipfel auf dem Grisपालten' = Piz Giuf, 3058 m. Spescha attempted this peak on September 12, 1804, with Hans Jacob Caduf of Ruäras, in Val Tavetsch, and ascended it in 1812.

19. In order to discover the sources of the Rhine, the Reuss and the Aar, Spescha made in 1811 a mountain tour of six days. Starting from Selva on July 29, he crossed the Oberalp, the Furka and the Grimsel, followed the Unteraar Glacier as far as the 'Abschwung,' visited the Handeck Falls, accompanied by the innkeeper Jacob Leuthold of Hasle im Grund, crossed the Susten Pass, where about 270 workmen were busy tracing the new road (abandoned in 1822), visited the Goeschenen and Kehlen Alps (to the foot of the Kehlen Glacier), and recrossed the Oberlap to his temporary home at Selva.

20. For his Alpine book, intended to be dedicated to Dr. Ebel, of Zurich, and to contain a record of his three ascents of the Oberalpstock, a description of the Kärschelen or Maderanerthal and an account of a visit to Einsiedeln, Spescha crossed the Krüzli Pass from Sedrun to Bristen, Amsteg and Altdorf (eight to nine hours' actual walking) on October 5, 1812. And on the following day he went by Flüelen, Brunnen, Schwyz, Steinen and Rothenthurm to Einsiedeln. After a stay of two days at the monastery, where he was well received by his old patrons and fellow-pupils, he went by the Hacken to Schwyz. Thence he returned with two poor students by Brunnen, Amsteg, Bristen and the Krüzli Pass in two days to Sedrun. Stormy weather and snow failed to hinder them or to spoil their good-humour.

The book (of which the preface and the dedication to Dr. Ebel was written) never appeared. We can be glad to see its contents now published by Pieth and Hager, as well as the 'Karte oder Handriss des Kärschelenthals,' which gives us a good idea of Spescha's somewhat schematic but accurate map-drawing.

Another result of this and several previous trips was the 'Carte spéciale et pétrographique du Mont St. Gotthard et de ses environs,' lithographed by M. F. Boehm and published by J. J. Waibel in Bâle before 1820. It is good work, although

financially disappointing, while the author complained of the indifferent lithographic execution.

21. Stocgron = Stockgron, 3418 m. Spescha made the first ascent of this peak (the fourth in height of the Tödi group) in 1782, a second ascent about August 6, 1788, with the sexagenarian Christian Mathiu Huonder, of Monpé-Tavetsch, and a shepherd from Alp Cavrein. They approached the mountain in a roundabout way by Val Acletta, Lac Serein, Brunni Glacier and Cavrein, to Val Rusein, and ascended the peak by cutting steps 'across a steep glacier to a glen coming down from between the Porphyry and the Stocgron and turning west after they had gained the arête.' They returned the same way to the Rusein huts and Disentis, where a few days afterwards Spescha presented Meiners with a bit of pyrites 'from the top of the Tödiberg.' Spescha attempted the Stockgron a third time about 1790 with the shepherd of Alp Rusein, but a hailstorm forced them to retreat when they were on the glacier south of the summit.

22. Môt de Robi = Kistenstöckli, 2748 m. After the storm had passed they abandoned the ascent of the Stockgron, and turning to the east crossed the glacier and some wild glens to the Gliemsglacier. Here they put on the rope and mounted to the Gliemslücke, where the shepherd remained behind, frightened by the view of the Ponteglias Glacier. Spescha continued alone. He crossed with considerable risk from concealed crevasses the Ponteglias Glacier to the Frisallücke, and descended by the Frisal Glacier to the hut in the Val Frisal. Here he was kindly received by the 'Rinderhirt,' who was greatly astonished to see a traveller arriving through such a wilderness. In his company Spescha, the next day, ascended the Kistenstöckli direct from Val Frisal (by the Cordas apparently) and regained Disentis by Alp Robi and Brigels. He confesses that the last bit of the way home was very tiring from thirst and fatigue.

23. Piz Urlaun, 3374 m. On his first attempt, about 1790, from Val Gliems, Spescha reached only a 'Vorstufe' of the mountain. On August 25, 1793, he gained the top, while his companions, Baron Johann Lucius de Salis and two teachers of his seminary at Haldenstein, Karl Witte and Glaubitz, remained behind, the former at the snout of the Ponteglias Glacier, the latter on the arête an hour and a half below the summit. A third attempt on August 19, 1822, failed miserably in consequence of the indiscipline and incapacity of his party, which consisted of an unnamed magistrate (probably

from Coire), Joseph de Manga, the manager of the mine at Ponteglias, an artist from Altenstadt, Joseph Niclaus Gächter, and six servants, porters and guides. They were well equipped with plenty of clothes and food, and even carried a ladder with them, with which to cross the crevasses. They intended also to make mathematical observations with some instrument made by Gächter from indications supplied by Spescha. But all was in vain, as they reached only a spot half-way between the Gliemslücke and the top in twelve hours from Truns. The descent to the house at the mine of Ponteglias took five hours.

24. Piz Tschenclinas or Piz l'Avat = Piz Gliems, 2913 m., in July 1803. Spescha undertook the journey from Somvix to Val Gliems in order to shoot game for the Bishop of Coire, who was expected for Confirmation. For some unknown reason Spescha changed his plans, and on arriving at the foot of the mountain he laid aside his gun and ascended to the summit of the 'abbot's cap' (the Romouch meaning of l'Avat). He had a fine view, but during the descent he strained his knee, in consequence of a too rapid glissade. Perhaps this was the penalty for the unchristian pride that filled the poor old monk's soul when he looked down onto an Abbot's head !

25. Rusein or Crap Glaruna = Piz Rusein, 3623 m. In his own reckoning, Father Placidus attempted this peak, the highest in the Bündler Oberland, no less than six times, counting his ascents of the Stockgron and Urlaun as preparatory excursions for it. On August 19, 1824, with a well-trying mountaineer, Paul Benedict Spescha of Truns, and the landscape painter Johann Baptist Isenring of Toggenburg (1794-1860), who joined the party for sketching purposes, Spescha set out to try the Piz Rusein in earnest. They went by Val Barcuns and Val Rusein to Val Gliems, where they passed the night in the shepherd's hut. The next morning they mounted the Gliems Glacier, but the incapacity and cowardice of Isenring frustrated all efforts of the two Speschas. They failed to reach even the Gliemspforte. A second expedition with Isenring to the Val Rusein to explore a direct access to the Piz from there met with no better result. More fortunate and more plucky were Speschas' companions on September 1, 1824, as we have seen. Their itinerary is not quite certain. From the hut at Rusein Sura, 2092 m., where they separated from Spescha and Cagenard, they 'mounted near the foot of the glacier on the west by the middle of the rocks of the mountain in a northerly

direction, and then turned to the west in order to reach the snow slope on the other side, which they traversed to the north-west to gain the highest summit.' This seems to indicate that the two hunters passed close to the Bleisasverdas Glacier (not named, but marked on the Swiss map) by the rocks of the S.W. face of the Piz Rusein, gained its south arête by the so-called Ruseinlücke north of the Piz Mellen, went over the highest snow slopes of the Biferten Glacier to the depression between the Tödi and the Rusein, and reached the summit from the S. or S.E. They were on the summit at 11 A.M., remained there only thirty minutes, and were back at Rusein sura at 4 P.M. Here Spescha, who had watched their ascent from the opposite slopes and, with the aid of a telescope, had seen the traces left by the climbers in *descending* from the snow cone, met them again and carefully noted the details of their ascent.

Thus ended Father Spescha's honourable Alpine career of forty-two years.⁴

SOME SCRAMBLES ON THE MONS LACTARIUS.

By J. L. TOD-MERCER.

THIS is the name given by the ancients to the west-running spur of the Campanian Apennines between Cava dei Tirreni and the tip of the Sorrentine Peninsula, of which it forms the backbone. The range is still known as the Monti Lattari. To the visitor accustomed to the rich verdure of our British hills the implication of opulence may sound a trifle ironical applied to the barren rocky fastnesses in the western portion of the chain here dealt with. It may be that in Roman times there was less rock and more grass; but, even now, such pasture as exists—patchy though it be—is still sufficient, with the terraced meadows lower down, to place this district among the dairying centres of South Italy, and make it one of the chief sources of supply of the excellent cream cheeses, called *mozzarella*, so deservedly popular in the Neapolitan provinces.

The range reaches its maximum elevation (4780 feet) in the nucleus of rock peaks called Monte S. Angelo a Tre Pizzi on the

⁴ See also Mr. Freshfield's 'Placidus a Spescha and Early Mountaineering in the Bündner Oberland,' *A.J.* x. 289 *seq.*

Italian I.G.M. map, standing roughly between Castellamare di Stabia on the N. and the bay of Positano on the S., but much nearer to the latter, from which it rises in a series of very steep pitches. The eastern Lattari run up to about 4300 feet, while W. of the S. Angelo massif the hills dwindle to quite small proportions.

Despite its nearness to Vesuvius this chain is non-volcanic. It is composed of dolomitised rock up to some two-thirds of its height, and the remainder of cretaceous limestone. The tilt of the strata is towards the south; hence the pitches on the Bay of Naples side are gentler than on the other faces, which are broken by cliffs and seamed by ravines. Step-like stratification is a leading feature, especially on the S. side.

Climbing interest centres mainly in the Tre Pizzi, or triple peaks, the greater height of which, moreover, gives them panoramic advantage over the lesser summits. The bold N.W. rock tower—the Mte. S. Angelo of the map, but known to the Sorrentines as Mte. S. Michele¹ from a chapel dedicated to the Archangel that formerly stood on the top—is the highest of the three Pizzi. It is also the most difficult to scale from any but the regular path. To the observer on the central peak it appears as a broad-topped inaccessible monolith rising perhaps a couple of hundred feet or more sheer from the grass saddle between the two Pizzi. Its other faces are more or less precipitous, that on the S.E. plunging down on to screeslopes. Mist interfered with a complete survey of all the S. Michele approaches, but there is no doubt that here the rock pioneer would have more than one—if but a short —‘new way’ at his disposal, and for the rest he would find compensation for his toil to the point of attack in the unrivalled Campanian land- and sea-scape unfolded beneath him.

The S. Michele portion of the massif throws off two steep-sided rock ridges, with stunted trees clinging to them here and there—one running N.W. much broken, and the other S.W. This latter, called La Conocchia on the map, is said to offer a practicable route² to the top. On the E. Mte. S. Michele—the summit of which is of considerable area and itself so much

¹ The miraculous appearance of the Archangel to two local saints who had taken refuge there from the Lombard invasion of the sixth century is the reputed origin of both names. The colloquial alternative name serves to distinguish this peak from the numerous summits (in and out of the district) called ‘S. Angelo.’

² See footnote 7, on p. 159.

tumbled and split up that from some points of view it looks like four small peaks—is joined to the middle Pizzo (locally known as the *Planche di Laurenzana*, *cir.* 4700 ft.) four or five hundred yards off by the above-mentioned grassy dip. This broad and irregular-shaped slabby mass in its turn is separated from the third and lowest peak—some three or four hundred yards to S.S.E.—by a well-marked narrow cleft, the *Passo dell' Inferno* (Hell Gap), the approach to which on the E. (traversed by the *Agëröla* route) is fairly steep, while the opposite face is almost precipitous and forms the head of a couloir, or wild gully, hemmed in by lofty cliffs and opening to the coast E. of Positano. From this gap both the central and southernmost Pizzi can be reached as described in what follows. The South Pizzo is the M. della Cardara of the I.G.M. map, but is locally called M. Catiello after one of the legendary sixth-century hermits who dwelt hereabouts. From this last summit the *arête* falls in an even sweep of moderate incline to the low *Paipo Col* which marks the southern limit of this little group of Salernitan Dolomites.

The literature about them is scanty, and I am indebted to the courtesy of the Naples Section, C.A.I., for some of the geological and general particulars here given. The Central and South Pizzi are often ascended by summer visitors to *Agëröla*, and the taller St. Michael's peak occasionally by the *Porta di Faïto*³ pathway approaching from the N.W. No records appear to exist of direct assaults on any of the cliff faces. This possibly explains why only one accident is known to have occurred, viz. in March 1907, when Signori Kernot and D'Ovidio fell over 1300 feet from the S. Michele down the *Pimonte* chasm on the N. side.

Professional guides, porters, blazed paths, and even brigands are unknown; and reliable topographical information is difficult to obtain: shepherds, shooters, and woodmen—often met high up in summer and autumn—are the best mentors, but their times are liable to understatement. The two minor Pizzi are easy of access from E. and S., on which sides they lack the Dolomitic boldness of the higher peak.

Undoubtedly the best starting-point for them is the prettily situated *Agëröla* upland, with its cluster of picturesque villages nestling among the terraced gardens of apple, almond, and vine, situated at a height of 2000 feet—two tedious, shadeless

³ *Faïto* is a corruption of *faggio*=beech, from the beech woods on the S.W. slope.

hours above Amalfi.⁴ Very fair accommodation was obtainable at Agērōla-S. Lāzzāro⁵ last year (1922) at about 80 lire a day *en pension*. From Agērōla itself only the two lower peaks are visible.

On the whole, from a climbing point of view, the best month for this region is from mid-September to mid-October. The higher levels are often snow-covered in winter and early spring, in which latter weather and temperature are equally erratic. Mountain springs are few and far between.

For the benefit of any who may wish to follow in my tracks I append some experiences during two recent visits to these Sorrentine hills, which I think deserve more attention than they have hitherto received even from Italian mountaineers.

The Central and Southern Pizzi.

My first expedition was made from Cāmpōra d'Agērōla. Starting at an easy pace on a close autumn morning, I struck up the first footpath beyond the bridge at the valley head, and ascending steeply through the terraced gardens—to the surprise of the puzzled but friendly peasants, many of whom, being returned emigrants, speak Yankee-English—I soon reached the chestnut woods. Bearing towards my right, in a little over an hour I struck the crest of the 'Mons Lactarius,' at a point nearly over the tunnel by which the Gragnāno high road pierces the peninsula 'divide.' The hills in this part are covered with sapling beech to the top, which, while impeding view, afford poor shade from the still powerful September sun.

Continuing W. over the rounded Acquara hill the wood ends, and one enjoys an uninterrupted prospect north and south over the Naples and Salerno Gulfs, with their populous shores, and of the now unvolcanic-looking Vesuvius (over which scarcely a wreath of smoke hovered!). Straight ahead stood the triple towers—the objective of my ramble—though the middle one especially is rather a broad craggy hill than a tower or peak. It was my first view of all three, and after the mild-lined Apennines mightily impressive they looked with their bold profile and tall northern crags of greyish rock. A vein

⁴ A carriage-road up from Amalfi is under construction. A motor-bus plies daily between the Agērōla villages and the Gragnāno terminus of the Naples-Castellamare railway.

⁵ My expeditions on this side were done from Agērōla-Cāmpōra, half an hour above S. Lāzzāro. Cāmpōra has no inn (1922).

of this bluish-grey limestone runs down the west side of Italy from the Apuan Alps to the Sorrentine Peninsula, with intermediate outcroppings in M. Amiata, the Ciminian Hill, and others. Here as there grottos and caves abound.

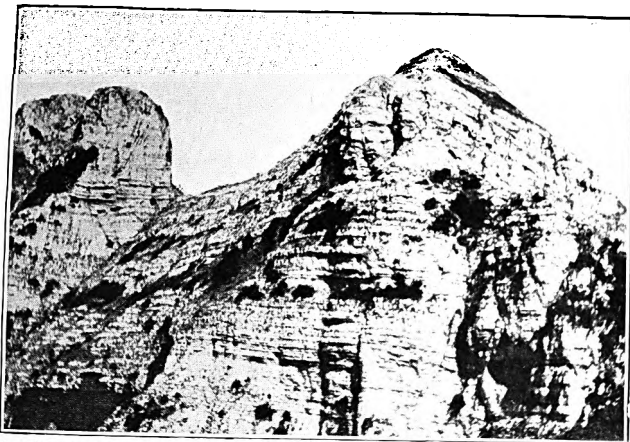
At the last dip before entering the boulder-strewn ravine that forms the obvious approach to the Pizzi from this side, one intersects the Colle dell' Acquara track, no doubt the old pre-tunnel communication between Agëröla and Castellamare. By this much shorter route I should have come up if a general survey of the hills had not been the first item on my programme.

The ravine is enclosed by the ridge I had been coming along (which becomes broken and rocky with crags on its S. face as it rises and merges into the Central S. Angelo) and a wooded E. spur of the Little S. Angelo (or M. della Cardara). The upper lip of the ravine is dented at its lowest point, and this *fenêtre*, sharply silhouetted against the sky, is the Hell Gap already referred to. It is soon reached by keeping close to the base of the crags and ascending the scree and boulder slopes at the head of the ravine. My time to this point by the roundabout route from Cämpöra was 3½ hours. Though called a 'pass,' there were no traces of the passage of even goats into the cliff-enclosed steeps beyond.

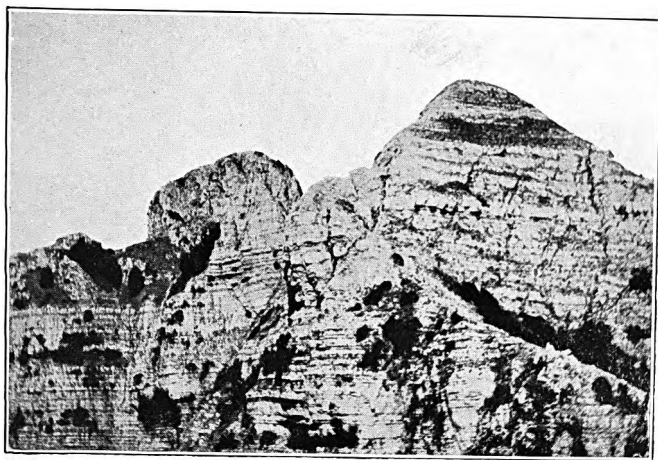
In this neighbourhood I picked up fragments of heavy dark-coloured rock of unmistakably volcanic origin. These bits of tufa and lapilli I had not noticed lower down. They were doubtless sent over by Vesuvius—13 miles away—in one of his *strafe* bombardments centuries ago.

Striking up the arête to my right, and sheering away from the abyss on my left, out on to the moderately inclined S. slope, I gained the summit in 20 minutes from the Inferno Pass by zigzagging up the natural steps and horizontal scree-strewn shelves that girdle this part of the mountain and which probably suggested the vernacular name 'Planche' or 'Placche.' This last pitch, as also my prolonged sojourn on the exalted but shadeless belvedere above, would have been trying but for a friendly parasol of haze that hovered overhead. Of the view what can one say more than that it commands the famous 'Due Golfi,' together with all the Vesuvius country and the red-brown patch of the Pompei excavations on the plain?

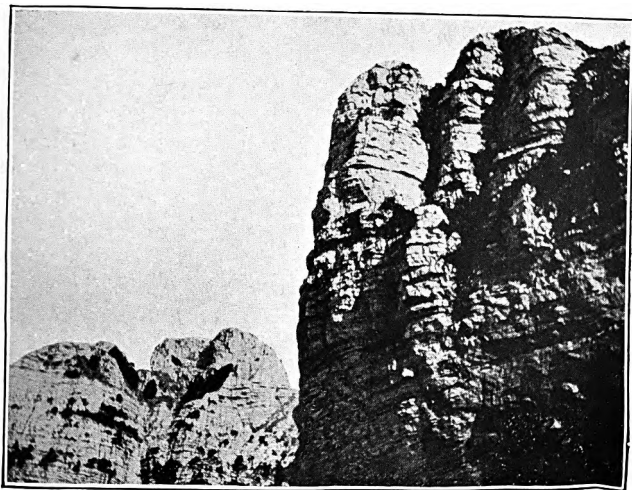
Progress westwards as well as the prospect in that direction was barred by the seemingly impervious wall of the massive Mte. S. Michele, from the brow of which slanted skyward a beam or the shaft of a fallen cross. Having surveyed the grand cliffs of both Pizzi from the saddle between, I recrossed



MTE. S. ANGELO A TRE PIZZI FROM BASE OF PTA. CARDARA.



IL "CANINO" ED IL "MOLARE" FROM PTA. CARDARA.



THE POSITANO FACE OF PTA. CARDARA.

By permission of SIGNOR INGEGNERE A. ROBECCI Prest. Naples Section C.A.I.

the central summit with its rough cairn and multicoloured mixture of eruptive and sedimentary debris and retraced my steps to Hell Gap.

The little Pizzo Cardara (M. Catiello) rises abruptly to the S. of the cleft ; fifteen minutes' scramble through beech bushes on the E. side enabled me to turn the cliff and reach the top. The view from this lesser altitude is in some respects superior to that from the Central Pizzo, as its more southerly position enables one to see past the other two to the end of the peninsula and on to the rock of Capri in the hazy distance. The magnificent crags and buttresses too—especially on the Positano side—are seen to particular advantage. I came across no eruptive matter here. The descent by the stratified limestone S.E. arête with its scant vegetation of wild thyme and an occasional dwarf ilex is easily accomplished in forty-five minutes to the Païpo mule-pass, from which Agëröla-S. Lâzzäro is a couple of hours distant.

St. Michael's Mount of Sorrento.

A week later I climbed the Monte San Michele, or highest of the three Pizzi, from the Pimonte halt of the Gragnäno-Agëröla motor-bus (1300 ft.), a village about four miles by direct route above Castellamare-di-Stabia and to the north of the mountain. From this point there is a good track practically all the way up, and a reasonable going time would be $3\frac{1}{4}$ hours. I took an hour longer owing to halts and lost time.

One leaves the high road at a small wayside fountain a few minutes above the church and ten minutes by short-cut from the village square. An ascending wagon-track makes straight for the hills, and on entering the chestnut belt becomes a deep cutting like the bed of a watercourse, with bright green lichen ornamenting its perpendicular walls of yellow tufa. One emerges from this on to a small plâteau—in autumn studded with cyclamen and crocus—and leaving the chestnuts behind crosses a gully by a rustic bridge. For the next hour the mule-track winds upwards through copse beech till it reaches an open shoulder of the big N.E. rib of the mountain. From here a first view is obtained of S. Michele Peak, square-topped and rising from its ridge high up to the left like a stunted tower. The track onwards zigzags from shoulder to shoulder up the rib till it joins the N.W., or Castellamare, crest of the massif at the Porta di Faïto Col, some 4050 ft. above the sea. The view N. and N.E. is increasingly beautiful as one ascends, although the conditions were not ideal that day with storm

clouds gathering on the Apennines and mist rising on the S. Michele itself. A peculiar streaky sky effect—probably due to emanations from Vesuvius—was as though a mighty mass of ochre-tinged telegraph wires stretched across the heavens from out to sea, passing in front of the volcano and on to the mountains behind.

From the Fauto Pass following the easy crest to the left (S.E.) in about fifteen minutes another mule-pass is reached, beyond which the arête is considered impracticable. Directed by some mushroom-pickers, I dived down a few paces to my left through the copse on the N.E. slope and struck an excellent track skirting the mountain-side like a terrace between the upper and lower cliff belts. Looking out between the tall beech trees that here shade the path, luminous intervals in the drifting mist revealed dream-like glimpses of the wonderland below, alternating with near visions of natural flying buttresses of soft-grey rock plunging hundreds of feet in sheer drops.

The wood ends in about half an hour and the broad track suddenly dwindles to a mere footpath. At this point I deposited my rucksack in a glade, and struck up a wide grassy gully, at the top of which I hit off another track, and following it to the left was quickly led across the rugged arête and round to the S.W. base of the big Pizzo. There is a broad grassy natural terrace here from which the tower springs. A wide stony path, cut into the rock, winds up and round the S. and E. faces to the summit, passing about half-way up a small open grotto, to the walls of which (in late September) clung tufts of a lovely pale campanula, its charm all the greater for the rareness of wild flowers in that driest season of the Italian year.⁶

By the time I reached the top visibility had so much diminished that I could see only the adjacent parts of the peak I was on and nothing at all of its neighbours. The highest eminence of the tumbled summit is marked by a cairn, a stone of which exhibits a whimsical colour-drawing of St. Michael standing sword and scales in hand over a prostrate human figure representing the devil! A quarry-hole or old lime-kiln on one side, together with the tilted beam I had seen from the central peak and masonry fragments strewn about, are all that remain of the former pilgrimage chapel to the Archangel. Here too was another assortment of volcanic tufas and lapilli, though, curiously, these did not seem to extend to the easily accessible S.W. turret of the tower.

⁶ Italy was still in the grip of a two-year drought.

Having waited an hour and a half in vain for the fog to lift, I descended to my sack-cache in fifteen minutes and retraced my steps to the mushroom col. Following the first descending track I saw on the wooded W. slope, I soon came upon the head-works of a water-conduit. Taking this as a guide for half a mile or so, I descended through beautiful beech and chestnut woods, and, bearing towards my right, emerged from them into a steep-sided rocky ravine—the Rio Campo di Mojāno. Crossing this near its upper end and following a goat-walk on the opposite face, I came out on an open shoulder, and, having left the mountain mist behind, had my first bird's-eye view towards my left of Sorrento and its still distant shore. Between me and it lay a broad expanse of hilly country, dotted with villages and furrowed by glens, with here and there the white streak of a road contrasting with the dark green of the slopes. More directly in front were the large groups of houses of Mēta and Vico Equense, with the placid Bay of Naples beyond. Conspicuous up the sapling-clad hillside to my right was the isolated chalet of Count Giusso, loftily perched on a spur of M. Faïto.

From here a tedious descent mostly by paved tracks and stairs (on which Tricouni nails slide murderously) brings one to the famous walnut plantations and to the road at Mojāno. Turning down it to the right I made a hurried descent to Vico Equense in an hour, in time for the evening tram to Sorrento—net time from the top of 'St. Michael's Mount' to Vico $3\frac{1}{4}$ hours. But for misdirection at Mojāno I should have gone the other way, viz. to my left, *up*, instead of down, the road, and so by the pretty glens and hamlets of Ticciano and Arōla to Sorrento in under three hours' fast going from the top. In the reverse direction this would take five or six hours.

In the following spring, lured by pre-war Baedeker and vague local reports, I tried the steep S. face of the massif, but failed to find a practicable direct ⁷ route up from Positano. The mountain on this side is defended at every point by belts of cliff of varying height, and is concealed from view from the township by the projecting rock of Montepertuso—one of the numerous naturally pierced crags, as its dialect-name implies. Arrived at the village above (half an hour up ramps from Positano), one has the peak in full view, surmounting its lime-

⁷ I have since learned from the Naples secretary, C.A.I., that Mt. S. Michele can be climbed from Positano via the S. Maria a Castello saddle and the W. face of the massif in 'over four hours,' but this is scarcely a *direct* route.

stone bastions. The approach at first is simple enough, a path—well marked in its lower part—leading upward from a point a few minutes beyond Montepertuso church. Within an hour, however, it dwindles, and losing it on the stony hillside, I tried (on my right) a deep cool ravine—almost a *cañon*, with pretty pansies growing in its nooks—originating in the heart of the range. From this easeful retreat I was brought back to my deviation point on the now scorching hillside by a brushwood-carrier who pointed straight up as the proper line. The faint goat-track soon petered out among the scree, and there was nothing for it but to try to force a way up to the base of what appeared to be the final crags. These I reached at a point (approx. alt. 3800 ft.) well to the S.W. of the S. Michele, after considerable beating about the bush and some scrambling up rosemary-covered rocks, but with so much loss of time and energy on that first really hot spring morning that, failing to see any way onward practicable for a solitary over-clad climber, with by that time crampy thighs, I decided to call it off and return by the way I had come. The Sorrentine noonday sun, powerfully reflected from the limestone cliffs, was scarcely tempered by a breath of air, and not a drop of water all the way up. A steep slabby gully on my right, with what had once been a fine waterfall just below me, was as dry as the rest. This gully turns a corner higher up, so that I could not see its head. It may possibly be a means of approach to the main peak. The old Italian ordnance map is so hopelessly vague and confused for the upper parts of these mountains as to be practically useless. From this vantage-point the eye swept across the Gulf of Salerno, sparkling in the noonday sun, to the Plain of Pæstum, backed by the still snow-streaked Lucanian mountains glistening here and there through the heat haze. Westwards Sorrento appeared beyond a dip in the 'divide.'

I had not gone far down and was still above the rosemary cliff cordon, when I struck a faintly traced path leading from the gully edge across the scree and rock slope in a W. direction. Following this the path improved, and after rounding the heads of many south-running couloirs (the ribs between affording fine *coups d'œil* over the W. end of the promontory with Capri beyond) it eventually led, in a little over an hour, to the crest of the spur called (I.G.M. map) La Conocchia, near its W. extremity. The pass of S. Maria a Castello, a deep dip of the peninsula watershed, was on my left front, but separated from me by the apparently impassable trough of the Gradona burn, which turns the end of this spur before precipitating

itself in a series of cascades on Positano. By retracing my steps a short way towards its head in a little, partly wooded glen, I turned the obstacle and reached the grassy 'divide,' to enjoy a final glorious panorama over the Bay of Naples to Ischia, backed by the distant hills behind Gaeta.

A cursory examination of the big deep-cut Acqua di Milo glen, a little farther to the N. and rising to the W. of my peak, did not seem to promise an easier approach to it. The chestnut woods between the two glens were bright with anemones and red and yellow orchis, in pleasant contrast to the barren declivities I had been on. The few cows grazing near the S. Maria Col were the first living creatures—except swallows—I had seen since the ilex-carrier some four hours before. After 2 P.M. the heat eased off rapidly, and I dropped pleasantly down the zigzag S. Maria path on Positano in a little over an hour from the turn of the Gradona glen.

THE NORTH-EAST ARÊTE OF THE JUNGFRAU AND OTHER TRAVERSES.

• BY D. E. PILLEY AND I. A. RICHARDS.

MOST people who went out to the Alps early this year took with them gloomy anticipations of cold, continually breaking weather. Disconsolately we envisaged the steamy ascent to the hut on the first fine day, the frustrated hours spent aloft in blanketed discomfort, the wet descent, the growing sense of futility. A regular repetition of this cycle of activity leaves so little for memory to feed upon that we felt that only an extreme resolve could save us from the calamity of a wasted summer. It took the form of an understanding that, short of absolute necessity, we would not spend more than two consecutive nights in any one low-lying region. Although a kindly fortune removed the primary reason for this resolve, we found no reason to depart from it. The thrill of descent into new country outweighed the convenience of returning to a centre. To go up by a route unknown to the party, to come down over slopes never seen before into valleys where the rocks, the trees, the houses, the very flowers are different, seems to us the way to wring the best joys from mountaineering. Though tastes will differ, even the intricate, new, or exceptional route takes, in this scheme, a secondary

place as a thing to be seized if opportunity allows, but not worth the sacrifice of valuable days in idle waiting for the propitious moment.

At first it seemed that the bad prognosis was to be justified, and we were careful to warn Miss Thompson, out with us on her first season, not to expect too much. It was cold, cloudy, and rainy on the Aiguille de l'Allée, an admirable training climb, easy rocks growing yard by yard more interesting, and culminating in really aerial scrambling. This broken weather continued. *Par un temps menaçant* we toiled up to the Mountet, and though strengthened by hot grogs on the moraine we found the walk long—and the sacks heavy.

Dark on their journey lour'd the gloomy day,
Wild were the hills, and doubtful grew the way ;
More dark, more gloomy, and more doubtful, show'd
The mansion which received them from the road.

Later with advantage we removed from the hotel to the Constantia Cabane, which under its present *gardien* extends a remarkable welcome.

The next day a bitter wind caught and paralysed us above the Col Durand. A crimson dawn had bathed the towers of the Viereselgrat in ill-omened glory, and now the sky was suddenly blurred with multitudinous rapidly moving cirrus wisps. Disks of snow-crust, torn up by the whirlwinds, stung painfully, and skins not yet hardened found the blasts unendurable. We turned back from the Pointe de Zinal and hurried down to spread ourselves lazily on the Roc Noir and watch the manoeuvres of a guided party on the wall of the Col. 'Deux dames,' they had exclaimed, on seeing the three of us, 'et point de guide, qu'elles sont courageuses !'

In the basin below, crevasses muffled over with snow-drift made us proceed with a caution which at the time we thought perhaps unnecessary. Next morning we saw more clearly the possibilities of the place. It was 2.30, and we were preparing in the little hotel to start for the Grand Cornier. A party from the hut had passed at 2.10, and as we laced up our boots an iterated cry came faintly up from the glacier. It might have been jodelling, but, as we listened, the cries were more distinct; indefinite alarm grew to certainty, it was 'Au secours ! au secours !' Seizing axes, rope and lantern, we dashed out and down on to the glacier. Red lightning was flashing behind the Gabelhorn, and the filmy moonlight shed an indistinct illumination. On the dry glacier all the hollows,

watercourses and crevasses were filled with lingering snows from the spring. Here and there rocks and holes made dark blots on the dim expanse. Less than a hundred yards out, in a place where many experienced parties might not have roped, three such spots in a line seemed to be the place from which the cries were coming. The word *crevasse* detached itself. One figure crouching with ice-axe fixed, another prone, immobile through the tension of the rope, the third blot a jagged opening like the mouth of a well—from this came the heartrending sound that tells of pain. It was not easy to find where the crevasse began or ended, it was still more difficult to lower a spare rope to the suspended guide owing to the thick overhanging eaves; any attempt to pull on the original rope had to be desisted from, owing to his suffering. Before long further help came down from the Cabane, and soon seven people were grouped on both sides of the crevasse. A third rope was lowered, so that he could be lifted from two directions at once, and an electric torch (very useful in the circumstances) made clear the position of the victim, some twelve feet down under the overhang. None the less, more than half an hour of strenuous toil elapsed before we got him to the surface.

Fortunately a doctor was present, and broken ribs and a perforated lung, the sad effects of this mishap, could be attended to at once. It is to be hoped that the unfortunate guide, a man of over sixty, of good reputation and betrayed on the simplest part of his own home glacier, made a good recovery. When we left he was progressing as well as could be expected. The points which most struck us about the affair were, first, the danger of the practice so common among guides of carrying coils of rope in the hand (the morning was frosty and cold, the surface of the snow hard; nevertheless a bridge had collapsed beneath his feet like a trap-door just as he was testing it); secondly, the extreme difficulty of extricating any person whose rope has cut under the eaves of a crevasse.

Thenceforward, when in our wanderings we were *d deux*, we set aside the ordinary Alpine rope and used 120 ft. of Alpine line doubled and furnished with loops so as to form a rope-ladder. This lesson taught us to walk warily and delicately in places where before we should have suspected nothing.

After this excursion the Grand Cornier, for which the unlucky party had also been bound, lost its charm, and we wandered tranquilly up the Besso instead, feeling uncommonly

tired and short of breath. Running hard and hauling ropes is especially tiring before dawn. Miss Thompson now took a rest-day, and we chose the Rothorn as the expedition least involving crevassed glaciers. We have always very equally shared the responsibility and work. Up crevassed slopes it is reasonable that the heaviest should advance first, downhill over the same ground the lighter—given equal experience—should precede; but to-day a desire of some years' standing was to be gratified, and the lighter was in front throughout. A guided party we overtook on Le Blanc showed some surprise at the order in which we were advancing. But the weather was breaking, clouds swept upon us at the shoulder, and a thick black storm was coming up from the west and blotting out Mont Blanc and the intervening ridges. We went on to a sheltered nook by 'Le Razoir.' Here the three parties on the mountain assembled trying to keep warm in spite of stinging hail-storms which swept over us. At last the situation but not the weather became clear, and we followed the rest of humanity on the downward track.

Next day Miss Thompson left us for Zermatt and the Matterhorn, and we were joined by Joseph Georges Le Skieur. As we lay in the sun and watched him descend from the Rothorn with a party of friends, we remembered, with a vivid pleasure, how we first met him. We were a guideless and weary party of four crawling in the evening light along the ridge of the Douves Blanches back from the Za, when we saw two little figures coming over the shoulder of the Clocher de Bertol, evidently looking for us. They went back, only to reappear almost immediately hurrying towards us. How we resented their officiousness! How pleasant to come upon them at the N. Col de Bertol, sitting nonchalantly enjoying the view—J. G. and the deputy gardien of the Bertol. With what a friendly gesture they produced the bottle of hot tea which they had gone back to fetch for our refreshment. It was great fun to meet him again, the three of us equally full of reminiscences and enthusiastic for future plans.

We were off early in the morning, with a farewell to the gardien—a man of remarkable charm who handled even an unexpected *pensionnat* of some forty schoolgirls with perfect aplomb and equanimity. Once again we attacked the Rothorn, J. G. deriving much amusement and pleasure from the fact that 'Mademoiselle' was acting as his guide up to the summit. The other side came fully up to our great expectations until we reached that notorious moraine. It was horrible to leave a

wake of dust like any motor-car, and worse still to follow through one !

Midnight, and impossible to start for the Ober Gabelhorn ; the thunder-storm broke just in time to save us from getting up. In the morning the flowers in the Trift glen, as everywhere this year, seemed richer and more plentiful than ever before. We came up from Zermatt with a new item for the provision-sack, Basler Leckerli, henceforth a staple article in our climbing diet. Incidentally we succeeded this summer in eliminating all tins from our sacks, with great benefit all round.

The long spell of fine weather started that evening and we were away at 2 A.M. for 'la course la plus chic de la région,' as a Swiss enthusiast described it. Probably the traverse of the Wellenkuppe Ober-Gabelhorn Arbengrat deserves this tribute as well as any other which might be favoured. The Trift glacier itself as the crystal clearness of the sunrise crept down upon it was a thing almost too exquisite to walk upon. On the first rocks of the Wellenkuppe a chough kept us company at breakfast, pursuing crumbs, as they bounded down the snow slope, with hops as singular as they were absurd. 'Je me demande,' observed J. G., 'ce qu'ils trouvent à manger ici en hiver ?' We halted under the snow-cap of the Wellenkuppe to put on all the clothes we had. On the other side a draught from the north had made the fresh snow crisp and bound it tightly to the old snow beneath. At first broad and gently sloping, the ridge gathers itself together to rise as a high-pitched roof and abuts on a great red gendarme, smooth-sided and clean-cut like the spire of a church. From its most repellent corner we found hanging an immense cable. The ascent of this was the least attractive and most fatiguing section of the day. Beyond, sweep after sweep of the clear white ridge, rising and falling and lipped to the left over the Zermatt valley like a broken wave, led up to the final rocks. Along this snow ridge, as along the edge of some cloud hung in the sky, we made our leisurely, effortless, and exciting progress in a situation unsurpassed for beauty and dramatic thrill. At the summit we met a party whose hats, appearing intermittently above the ice bulges of the N. Arête, had from time to time been a distraction. After some conversation we began our descent. About the Arbengrat we knew nothing whatever except that parties following it sometimes returned very late. We therefore made some haste down these magnificent rocks, nowhere very difficult, but continuously interesting. On the Arben glacier J. G., seeing an opportunity for an intricate

but safe glacier descent, a branch of the sport which he particularly favours, left the usual route to the right and cut straight down through the middle of the ice-fall.

From Zermatt we were soon away, regretting only that an expedition planned with Dr. McCleary fell through at the last moment. We did not know that it was necessary to ask for the train to stop at Rothen Boden and were involved in a dusty descent from the Gornergrat to the glacier. The way up from the Bétemps in the morning was complicated for us by an attempt to follow the meanderings of some lanterns ahead; eventually we ran down their bearers perched on some rocks which they declared impossible in all directions. Passing them, we saw them again from the summit not much farther on. Although no wind was stirring, this was for us the coldest day of the summer and before we reached the sunlight Monte Rosa justified its reputation for chilliness. On the rocks of the E. ridge of the Nordend we came across an immense coil of cable and several hundredweight of iron pitons hidden under a boulder. We wondered very much what they were intended for and soon found out, for it needed very vigorous efforts to overcome the steep little rock-wall on to the ridge at the point at which we climbed it.

The tour of the summits to the Signalkuppe was enchanting. The vast gulf on the Italian side, filled as the day grew older with huge towering masses of cloud which seemed always approaching us without ever coming nearer, the steep snow couloir to the Ostspitze, the hour of slumber on the Dufourspitze, the discovery of immense steps leading up the ice of the Zumsteinspitze, the ant-like aimless wanderings of tiny figures on the plateau below the Margherita Cabane, the arrival at the Cabane with its *garde-fou* and spectral *lucarne*—all these made up an unforgettable impression. We rested there the next day, distracted by streams of visitors from the Gnifetti hut, which was evidently during the holiday-time a place to be avoided. Our second night was less successful than the first as far as sleep was concerned, the window being sealed by national feeling in a manner familiar to alpinists. Only when our hearts ceased to function and a medley of snores reassured us did a surreptitious loosing of the shutters restore respiration.

There are few places more perfect at dawn on a clear morning than the Lysjoch, with the pyramid of the Parrotpitze half lit, and the rich gloom of the ice valleys contrasted with the lustre of the near ridges. The Lyskamm on this day was unbelievably simple; the celebrated cornice whose reputation

had a little intimidated the amateurs of the party was harmless, less formidable than some on the Gabelhorn and Nordend. The whole ridge was an ethereal walk, curving, rising and falling in great sweeps which passed by without effort and without even that slight mental strain which accompanies so many glorious expeditions. On the Felikjoch we were in two minds about the Zwillinge. After some debate Joseph gave the casting vote. Pollux we cut, because its rock ridge looked uninviting, and, as the Zwillings-Pass looked to us impossible, we came down by the Schwarzthor, the final ice bulge of which was very awkward this year.

Two days later we were on the Tête Blanche. Some ideas about the N. Arête of the Dent Blanche had been disturbing the mind of one of us since a visit to its foot in 1913. These we now hoped to put to the test, but a queer lassitude which lingered for six days after the two nights at the Margherita combined with other considerations to make us decide at Bricolla to leave at once for the Oberland. The record of exploration, including a determined attempt by three Swiss who bivouacked for two nights on the Col, this year leaves no doubt that the expedition, if ever it is made, will be severe. The decision to move on at once and spend the next few days in ordinary expeditions caused J. G. intense disappointment. We went down the same night and were injudicious enough to start for the Belalp from Brigue at noon on the hottest day of the year: a gloomy party collapsed exhausted on some ant-heaps under a tree just above Naters. 'Quelle charogne de bêtes!' said Joseph, every time he woke up. None the less not till dusk did we toil on up the interminable path, sack-straps cutting through the shoulders, one foot dragging after the other; we all agreed that this promenade was the hardest expedition of the summer..

At the Aletschhorn hut we were welcomed by two cheery Swiss climbers with the best coffee in the world. They were lamenting that they had brought up too many provisions to be able to make any traverses, their sacks would not allow it. When we saw the baskets overflowing with their tinned food we could believe them. Our own sacks at the beginning had been fairly well charged, though not with tins—aneroids, telescopes, verascopes, 100-ft. coils of Alpine line, Pyrenean wine-gourds, cooking apparatus and heavy reading; these kinds of things were left behind at every halting-place. By this time we had reached the Spartan limit and were travelling fairly light.

The Aletschhorn up the S.W. ridge we found monotonous and exhausting. We were still all suffering from an odd weakness which we attribute to our Monte Rosa days. The boulders and shale of that slope which never develops into even moderate scrambling seemed even more tiresome and uninteresting than perhaps they are. The other side was a different matter. A beautiful snow-field, with beyond it the peaks of the Oberland, now seen by us all for the first time, led down to a narrow ice-ridge. The level floor of the Aletsch glacier, far down to the left, looked singularly unapproachable, until, beyond a broken chaos of overhanging séracs, we could see a thin rib of rocks rising towards us in low relief upon the great wall of ice. Gaining these we scrambled quickly down, but the way seemed long and hot; a caravan going down to the Concordia from the Lötschenlücke came and passed and vanished before we left the rocks, crossed the bergschrund, and came out into the middle of that vast corridor which to us, never before visitors to the Oberland, seems still its most moving and impressive feature.

The immense scale of these glaciers and the peculiar lure of the passes which are so often seen, indefinitely remote, as at the end of immense avenues, we felt again as we went up from the Concordia in the morning towards the Jungfrauoch. An odd place the restaurant there—a cross between a cowshed and the Trocadero, with flavours of the Bakerloo Tube and the caverns of Cheddar. We came down to it from the Mönch, which we traversed, up by the pleasant S.W. ridge and down by the E. The glacier was strewn with prodigious masses of ice—a large part of the covering of the Mönch must have fallen away earlier in the year; they formed three long curving piers from twenty to a hundred yards wide, their vertical walls sometimes 30 ft. high. J. G. no less than ourselves was amazed at the sight and suggested that we should photograph ‘ce spectacle unique.’

To enter the Jungfrauoch Hotel from the Mönch one crosses an ice slope in full view, walks a plank and clammers through a window, to land among a cosmopolitan crowd writing post-cards and drinking Asti. Water, by the way, is unprocurable at this establishment, the reason *given* being that it would be snow-water and therefore unhealthy!

All the day the fascination of the great N.E. Ridge of the Jungfrau rising in four great sweeps from the Jungfrauoch had been growing upon us. We had read of its descent in 1903 (*A.J.* xxii, p. 566), and we heard now of its first and only

ascent in 1911. By this time we had recovered and were feeling in great form, ready, as we had not been lately, for an exceptional expedition. To make sure of this we took a rest-day, but Joseph's enthusiasm was too great to restrain, and he went off early alone on a reconnaissance, about which we were sworn to secrecy. The afternoon was shadowed with the sombreness of an accident. A girl we had seen going off gaily at about 11 A.M. was struck just below the summit of the Jungfrau by an errant stone. Joseph's quick eyes were the first to see the signals, and within twenty minutes a party of guides with stretcher and sledge was *en route*. Their careful descent with her was a remarkable sight, but we wished the crowd had shown more consideration and less curiosity when they arrived. We heard that it was a head-wound and that she was conscious, but she was taken down the railway immediately.

The next morning we started at 4.45 A.M. up Pt. 3560, nowadays known as 'Matilde,' a little snow-peak on which the day before we had seen so many tourists first experience what it feels like to be in snow-steps—a form of sport this which could not have been more amusing to them than was to us the speculative game of guessing what their varying aptitudes would be as we watched them set out.

Beyond 'Matilde' the ridge begins at once and rises, at first snow, then moderate rocks, to the foot of the great gendarme or sentinel which guards and prevents access to the ridge. This gendarme we found the main difficulty of the climb. 'Ce n'est pas un gendarme, c'est plutôt une montagne,' as J. G. remarked. It is impossible direct and has to be turned on the N. or Wengern side. Here the rock is broken and deeply disintegrated. There must this year have been far less ice than when Herr Weber climbed it in 1911 (see *A.J.* xxvi. p. 344), for our route lay wholly upon rock, or rather, upon rocks. We could only advance with extreme slowness and caution, one at a time. No leader not endowed with great delicacy of movement and a fine instinct for the handling of loose blocks could possibly make the passage with safety. Every few yards it was necessary to mount straight up, and here the problem involved by the presence of those below called for very careful placing and clear thinking. The fact that it was hardly ever possible to secure the rope in these exposed situations well shows the rottenness of the face. None the less, such was J. G.'s prudence and so well was the party working together that at no point were any stones accidentally dislodged, although for some steps wheelbarrow-loads of débris were tipped into the void. Need-

less to say we had made sure of the absence of any parties below. We shall never forget the rising drone from those dreadful flocks of humming-birds as they swooped down to the Guggi glacier. During these two hours the horrible temptation to the imagination offered by these stones as we watched them leaping further and further and dwindling in size beyond the power of the eye was by far the most disturbing feature of the experience. It was nine o'clock when we reached the crest of the Sentinel and breakfasted with a distressing sense of eyes behind telescopes. From here onwards, by pleasant rocks reasonably sound, we advanced rapidly over Pt. 3788 until a gendarme-studded rise led up abruptly to a snow-capped summit (Herr Weber's 'huge secondary summit'). These gendarmes again forced us to proceed one at a time; they gave admirable sound climbing, and, unlike Herr Weber, we did not find them at all comparable in difficulty to what had gone before, although at one point we were again forced, as was he, to take to the dangerously rotten north flank. The snowy point to which they led assumes great prominence from the Jungfraujoeh station and appears almost equal in height to the Jungfrau, completely hiding a long and difficult section (about one-third of the ridge) which connects it with the Wengern Jungfrau. The whole ridge divided itself for us into four sections: first from Matilde to the Sentinel, roughly S.W. in direction; second from the Sentinel to the point now gained, the 'huge secondary summit,' S.S.W.; third from this point to the Wengern Jungfrau, S.W.; fourth from the Wengern Jungfrau to the summit, S.S.W.

The continuation of the ridge gave us the most exhilarating piece of snow-work imaginable. A sharp ridge corniced on the left ran ahead for seventy feet, then turned at a right angle and became still sharper, with an immense dilapidated cornice overhanging the snow-gulf below. Across the first stretch, knocking off the cornices, which hissed like dragons in their descent, J. G. proceeded to the angle. Here there was nothing to be done but for the second to seat herself astride the edge, watching the rope, while J. G. began to make further progress. A crack of uncertain depth separated intermittently the crazy cornice from its supporting ridge. Astride himself, one knee in this crack, the other over the Giessen glacier, J. G. warned us not to be alarmed by the probable fall of the cornice. Indeed, the situation was such that if this occurred nothing more than a shock to the nerves was possible, and whoever was moving would be left safely straddled, however aerially poised, with

vertiginous walls falling on either side. Though we clearly realised this, the thought of the sudden disappearance of so large a part of the landscape caused a lively perturbation. It was almost with a sense of disappointment that the third man shuffled off without anything having occurred. And now began the best rock-climbing of the ridge, culminating in three gendarmes which, progressively more difficult, led in steps to the Wengern Jungfrau. The last of these is a very wonderful affair and caused J. G. some surprise. 'Je me demandais où diable ils sont passés?' he confided to us later. Very steep slabs sprang up, holdless except for small nicks, invisible from below, near the right-hand uppermost edge. No more exposed climbing than this could be found.

It was about half-past three when we reached the Wengern Jungfrau, Pt. 4060, and the end of the serious difficulties. For some two hours the darkening sky and the sound of

'The archangels rolling Satan's empty skull
Over the mountain tops'

had been disquieting. To the peculiar feeling in the muscles which tells of a big electrical disturbance was now added music from the axes. The party was slightly reassured by discovering that one was rendering 'God Save the King' and the other 'Rule, Britannia'; what J. G.'s axe was doing we had no means of ascertaining. It was probably something inspiring, for we advanced with remarkable élan. About this time a black mist enveloped us, and as we hurried in crampons over the snow-ridge which links the Wengern Jungfrau to the highest point it was impossible to see more than a few yards in any direction. Suddenly we found ourselves apparently in the bowels of an ice-fall; in and out, up and down, through gigantic schruns J. G. led without any bewilderment; there was a dream-like, or perhaps nightmareish, quality about this which a blinding hail-storm accentuated. A singular suspense, as though the storm were gathering for a climax, caused us most apprehension. We struck rocks again, which were rapidly whitening under the hail, and suddenly we were passing through a net-work of iron struts—the signal on the summit—a by no means welcome neighbour at the moment. Down the opposite slopes of shale we scuttled as if the ghost of Satan, in that darkness, were at our heels. We were hardly 100 feet down when what we were momentarily expecting happened. It was so violent that the second member of the party dropped her axe and sat down, to the consternation of the others. In a blue

glare, to the sound of the heavens falling, a companion tumbling prone on the snow is a discomfoting spectacle. Nothing was amiss, however, and we continued to descend rapidly, although drifted hail smothered all the ice-steps and made this none too easy. It was a relief to find ourselves over the Rôthal Sattel and to eat in comparative shelter. Below during these hours the hotel had been occupying itself with gloomy expectations; they had made up their minds that we should spend the night in some crevasse. 'Nous n'y avons pas pensé!' as J. G. said. It seemed only a few minutes (actually sixty-five from the summit) before, wet through, we reached the hotel, the storm still raging. After this, since so serious a break had occurred in the weather, we decided to cover as much ground as possible, not aiming particularly at big peaks.

We went down to Grindelwald through a dull tube, to find the pastoral scenery most refreshing, and were hardly prepared for the magnificence of the Bear. We relished its baths after so many days of Cabane life, but were drawn back next day to the Strahlegg hut. Here we were lucky enough to get up the Schreckhorn, in cold conditions, before another heavy snowfall. This we thought a most attractive climb; our only regret was that the cold forced us for once to break our rule of coming down by a different route, preferably into a new valley. The next day so much snow fell that we began to wonder if we should even be able to get down from the hut. All the other parties cleared out and we had packed our sacks and locked the shutters when we spied a patch of blue sky. This sight and a new card-game we had taught J. G., from which it was difficult to tear him, turned the balance; we risked some days of short commons and remained at the hut. We were rewarded by being able to get over the Strahlegg in a snow-storm, a day made memorable by the addition to our party of two unknown boys who had arrived the previous evening. They fed J. G. with pieces of cheese, his favourite food, and hung around like retainers. When at the Gagg they imagined they were already on the pass. It appeared clear that they would be safer tied on to our rope. It was bitterly cold and they had no gloves, but had to make shift with our spare socks. As to their methods of descent, these were elementary and, unchecked, would have been speedy. The schrund was gaping rather widely, and though they might possibly have shot it headlong, of this we are not certain. However, after some explanation they began to see the advantages of more orthodox methods, and on reaching the glacier they turned delightedly to J. G. to ask if he had ever

done anything more difficult. J. G., who is the soul of tact, did not disillusion them.

At the Grimsel, which caught us instantly with its *Cymraeg* spell, the time came to say farewell to Joseph. The links of companionship formed when toil and stress, ease and triumph and disappointment have been shared in common grow firm and are not easy to sever. There are few better ways of learning the essentials of a fellow-being than such a journey as we had been together. Merely from a technical point of view the traversing of a dozen quite unknown 4,000-metre peaks without a moment's confusion or the slightest check is not an ordinary man's performance; and when to the quiet and daring mastery of every incident of high mountaineering is added an uncanny insight into the moods and half-formed feelings of companions, a delicious, whimsical play of humour, a gift for friendship and a great fund of natural, simple feeling, a devastating shrewdness and the crispest modes of expression, the personality that stands out becomes both vivid and appealing. We watched him striding up the slopes to catch his train at Gletsch, to join friends of ours, with much more than the usual regret that a party which had been happy together should break up.

Hereafter we continued our scheme of travelling light and wandering. At nightfall we were walking in the moonlight up the Lötschenthal, which, wonderful though it is by daylight, was then like a fairy tale. With Roberts and Hollingsworth we had hoped to do the Bietschhorn and other expeditions, but broken weather frustrated our plans and undertakings. From the Mutthorn hut we went on a cloudy morning to the Lauterbrunnen Breithorn, dividing at the rocks into two ropes. The sideways thrust of the wind on the final snow-cap made us glad of our crampons, even though putting them on involved an ordeal for the fingers. It was a day for rapid moving, and no sooner were we back in the hut than snow started falling seriously and continued heavily all night and the next day. There was a Swiss there supporting life under these rigorous conditions upon raw carrots; it made us shiver to see him gnaw them. The second morning a glorious sunrise and a fading moon saw us descending the Kanderfirn. On our right the south face of the Blümlisalp, so black two days before and the object of our ambition, was pure white from crest to base. We were glad, when we saw the state of the glacier, that we had not endeavoured, as we half thought of doing, to go down during the storm. Coffee and the first warmth of the sun at the Gasthaus

put us in a mood to appreciate the valley. It seemed to us as fine as the Val d'Arazas. That evening we were at the Oeschinen See, an unforgettable place, and next day we left Kandersteg for Zermatt. Here A. E. Field, indefatigable wanderer, and a friend of his joined us to go over the Théodule into Italy. We started very late, thereby enjoying a truly Italian sunset on the col. Perhaps this late start was the reason for the fatigue we felt next day toiling up grass and scree towards the Col de Vaufrède. On the glacier we felt better at once, as so often happens. Down the other side we crossed a strange chaos of boulders among which the Lac du Dragon and nine other lakelets lie bound, all of different colours, and gained the Col de Bellatsà. A little way down the fine glacier of that name, which has surprises to offer in its lower reaches, we overtook a party without either crampons or step-cutting ability. They were apparently expecting to come across the Rifugio d'Aosta at any moment! It was then towards six, so they did wisely to return to Valtournanche, whence they came, as soon as they saw what was ahead.

Prarayé offers nowadays very comfortable quarters and there is no longer any reason for the peaks around to be neglected. We made an attempt to fit in a scramble on the Cengle before going up to the Rifugio d'Aosta, but merely got a soaking for our pains. It cleared next day and we bent ourselves under four days' provisions and more wood than we could burn and went up to the hut. We gazed rather resentfully, wonderful as they looked, at the whitened faces of the Bouquetins, for that white glory meant the ruin of many cherished hopes and dreams. The wind continued high, and next morning, when we had walked round by the Tête de Valpelline to the Col du Mont Brûlé, its icy breath soon made clear to us the impossibility of serious climbing. It was some consolation to crawl into shelter and look up at the wall of the Petit Bouquetin down which, with Joseph, we made at dusk in a snow-storm two years ago a descent of a kind which we none of us wish to repeat. Now in the clear light, with the ledges well picked out by new snow, we could see other and better ways. But they would need perfectly dry and warm rocks. It was annoying to be debarred from trying them. We came down to the Cabane by rocks to the right of the Za de Zan glacier, a much quicker way than walking round the snow. The Za de Zan Alp on the right, to which the cows mount after an hour's walking on the glacier, was alive with marmots and white with edelweiss.

That night snow fell again. It seemed to us plainly idle

to wait for better weather. Leaving our supplies behind with more patient friends in the hut, we were soon running down the valley below Prarayé bound for that haven of the weather-defeated climber the Couronne at Aosta. It seemed to us that the luck which had kept us company from the Mountet had at last run out only a day or two before our holiday-time expired. We were mistaken. There still remained for us the Bec de Luseney, one of those rare peaks the way up which is exactly as it should be. We came down by the S.W. face, which is much less convenient. Only the sudden emergence in the midst of an immense clavier of a good, worn path, so characteristic a relic of the time before the Great Plague when the Valpelline was a densely populated valley, saved us from being very late. Next day our luck reached its climax. A ridge noticed and explored two years ago gave us a first ascent, that of the Picion Epicoun, which as a rock-climb seemed to us to be difficult to surpass. None of the usual routes on the Chamonix Aiguilles, for instance, give more interesting climbing, sounder rock, finer situations, or a more satisfying expedition. Difficulty requires repeated attempts before it can be estimated and we are ourselves at variance upon this point. From the summit the best way back to Chamin is over the Bec d'Epicoun to the west. Here a thick local mist enveloped us, inconvenient seeing the lateness of the hour (6.0), and our complete ignorance of the very confusing topography. We were lucky to get down in comfort. In fact, only ability to descend rapidly in the dark, gained through winter expeditions in Wales, enabled us to avoid a very undesirable predicament.

This finished our summer's climbing. By the Col de Berlon and the wilderness of the Otemma moraines we crossed to the Chanrion Alp and hunted long in the early dusk for a hut, which proved to be empty. The next day, as we hurried down the Val de Bagnes under a cloudless sky, we were keenly conscious of the truth of a remark which Joseph was fond of making, 'We may none of us ever have such another season again.'

'LE TEMPLE DE LA NATURE' AT THE MONTANVERT.

ON September 2 a ceremony of some historical interest took place at the Montanvert, the 'inauguration' of the *Temple de la Nature*. The eyes of most of us must have rested on this tiny building, but probably very few of us imagined that it had ever been more than an insignificant appendage to the hotel, or that it could lay claim to so high-sounding a title. Forbes¹ describes it as 'a small solid stone house of a single apartment, built at the expense of M. Desportes, the French Resident at Geneva, having a black marble slab above the door, with the inscription, *A la Nature*.' It is ignored by the 'Alpine Guide' and in modern editions of Baedeker, but its memory has been preserved in successive editions of Murray's 'Handbook,' the later of which add the information that it was long used as a drinking-room for the muleteers, and that Desportes was a disciple of Rousseau; it also crops up, through an odd accident, as 'the so-called Temple' in the ALPINE JOURNAL.² The whole story is as follows: The earliest visitors to the Montanvert found nothing in the nature of a building save a primitive shelter erected by a shepherd. In 1779 an Englishman, Charles Blair, had a rude stone cabin erected, which, according to Coolidge, lasted till 1812 only, but which Murray (1838 ed.) refers to as still existing as a cow-house or stable. Be this as it may, some fifteen or twenty years³ after its erection, the 'vain and ostentatious' Desportes supplied the funds for a new 'pavilion,' which was built by a Genevese architect, Jean Jaquet, under the direction of the celebrated Bourrit. This was the *Temple de la Nature*, which for about forty years remained the only shelter for visitors to the Montanvert. In 1840 it became an annexe of the new hotel, and later still a washhouse. It was rescued from this ignominious condition quite recently by the pious exertions of the C.A.F., the Touring Club of France, the Commune of

¹ See Forbes, *Travels through the Alps of Savoy*, 1900 edition, pp. 70-71, and W. A. B. Coolidge's Notes.

² *A.J.* vii. 433.

³ Modern authorities agree in giving the date as 1795, but the unnamed traveller of *A.J.* vii., whose evidence ought to be good, seems to make it 1799.

Chamonix-Mont-Blanc, and other local bodies, and now the restoration of its ancient dignity was to be suitably solemnized.

It was a beautiful day and extremely hot, and the invited guests were only too glad to avail themselves of the free railway tickets placed at their disposal. The Chamonix band, which was very much in evidence throughout, led us, to the strains of a lively march, from the station to the hotel, where we found tables covered with recently filled wine-glasses, and began the proceedings by drinking to the memory of Pocock and Wyndham. About noon we adjourned to the Temple, a stone's-throw away, and the Mayor of Chamonix, standing at the top of the steps, and supported by half a dozen of the oldest Chamonix guides, delivered a short but effective harangue, declared the Temple open, and invited us to go inside. We found the 'single apartment' gay with flowers, and its walls more permanently adorned with wooden tablets, which recorded the history set out above, and gave the names of about thirty distinguished personages who had visited the building in the past.

Then to lunch; but we had hardly taken our seats when a door opened unexpectedly and admitted a lady attired in the style of a century ago, who introduced herself as Mlle. Perrichon; she was followed by a very comical figure who hardly needed her introduction, he was so obviously M. Perrichon, whose famous 'Voyage' we have all laughed over, and then by another lady in attire half Alpine, half Arctic, which, I was informed, represented fairly accurately the costume worn by Mlle. Henriette d'Angeville on her ascent of Mont Blanc. Mlle. Perrichon was, I learned later, a well-known member of the Théâtre Française; she delivered her monologue, which she had composed herself, with great spirit and humour.

Over the lunch and the speeches I need not linger. There was a pleasant interval for talk outside, and I had barely begun to think of getting back when the train reappeared and carried us down to Chamonix. Altogether a bright and well-organized little function, at which one was very glad to have been present.

A. L. M.

Since the above lines were written I have had the opportunity of reading a detailed account of the Temple and its fortunes, by M. Charles Gos, in *La Semaine Littéraire* for October 6, 1923. It is a charming article and will, I hope, find its way in due course into one of the Club albums.

THE MOUNTAINS OF THE COLUMBIA ICEFIELD, 1923.¹

(Rocky Mountains of Canada.)

By J. MONROE THORINGTON, M.D., F.R.G.S.

' Our course lay, for the most part, over vast fields of snow, but the early portion of it presented scenery of surpassing beauty, far more magnificent and dazzling than that of the day before. There were broad and bridgeless chasms, whose depths the eye, from their dizzy edges, vainly sought to ascertain ;—towering masses, in forms that, from their strangeness, seemed unreal ;—spires of brightness, grottos and palaces of frost,—here recent, soft, of snowy whiteness,—there older, hardened, passing into crystal azure,—sprinkled with frozen dew, festooned with silver fringe ; their inmost caverns dark,—vast stalactites of ice, in line, guarding the portals.'

DR. MARTIN BARRY, 1836.

' Pursuing the path, I next caught a glance of an icy forest of miniature pinnacles and spires, still freezing in the morning air. However elegantly these fairy structures may be formed, they successively dissolve in the warmer atmosphere, and being hardened again by the nightly frosts, are perpetually starting again into new objects of wonder.'

FREDERICK CLISSOLD, 1823.

' Now the violet tint was upon us, but the summit of the mountain was still burnished with a line of bright gold. It died away, leaving a lovely red, which, having lingered long, dwindled at last into the shade in which all the world around was enveloped, and left the sky clear and deeply azure.'

JOHN AULDJO, 1828.

¹ This article continues and completes a study of the principal icefield sources of the North Saskatchewan river ; it is a sequel to 'The Freshfield Group, 1922' (*A.J.* xxxiv. No. 225, p. 387).

While this region has long been known, this is the first account of exploration based on the maps and nomenclature of the recent Interprovincial Survey. The writer desires to acknowledge indebtedness to the Interprovincial Boundary Commission, and to the Department of the Interior, Topographical Surveys Branch, Ottawa, for many courtesies.—J. M. T.

'Even where all men go, none may have stopped ; what all men see, none may have observed.'

JAMES D. FORBES, 1842.

HISTORICAL AND TOPOGRAPHICAL.

IT is of interest to the mountaineer of to-day to learn that the question of altitude in the Canadian Rocky Mountains, and the position of their greatest uplift, was being investigated more than a century ago. Thus, in 1809, at a time when the Continental Alps were shrouded in mystery and superstition, we find David Thompson,² the explorer of the North-west Company, writing as follows :

'To ascertain the height of the Rocky Mountains above the level of the Ocean had long occupied my attention, but without satisfaction to myself. . . . I found the height of Mt. Nelson to be 7223 feet above the level of the Lake,³ which gives 13,123 above the Pacific Ocean ; of the secondary Mountains on the east side, of one Peak, 10,889 feet, and another, 10,825 feet above the level of the sea, but for the primitive Mountains I could not find a place from which to obtain a measurement and be in safety ; but 5000 feet may be safely added to the height of Mt. Nelson to give the height of the primitive Mountains. At the greatest elevation of the passage across the Mountains by the Athabaska river, the point by boiling water gave 11,000 feet, and the peaks of the Mountains are full 7000 feet above this passage, and the general height may be fairly taken at 18,000 feet above the Pacific Ocean.'

This overestimation of altitude was perpetuated by later travellers, notably by David Douglas,⁴ the Scotch botanist, who, in 1827, crossed Athabaska Pass :

'After breakfast, about one o'clock, being well refreshed, I set out with the view of ascending what appeared to be the highest peak on the north or left-hand side. The height from its apparent base exceeds 6000 feet, 17,000 feet above the level of the sea. . . . This peak, the highest yet known in the northern continent of America, I felt a sincere pleasure in naming Mt. BROWN, in honor of R. Brown, Esq., the illustrious

² *Thompson's Narrative*, 1784-1812, p. 403. Champlain Society, Toronto. 1916.

³ Lake Windermere.

⁴ *Douglas' Journal*, 1823-27, p. 72. Royal Horticultural Society. 1914.

botanist, no less distinguished by the amiable qualities of his refined mind. A little to the south is one nearly of the same height, rising more into a sharp point, which I named Mt. Hooker.'

It was many years before these great heights were proved to be non-existent, and they were the source of much perplexity to the first climbing parties. Thus, after a journey to the Freshfield Group, in 1897, Collie⁵ and his companions are in doubt as to whether 'the high peak he had seen from the slopes of Mt. Freshfield might be either Mount Brown or Mount Hooker, the two mountains standing on either side of Athabasca Pass, and long reputed to be the loftiest summits, not only of North America, but possibly of the entire American Continent.'

The altitudes ascribed to Mts. Brown and Hooker did, however, serve a purpose, because they led to further discoveries in a land of splendid peaks and extensive icefields, and drew men into what is now known to be one of the finest scenic areas in the Rocky Mountains.

In 1858 Dr. Hector, of the Palliser Expedition, sent out from England to explore for passes across the range, discovered the Lyell icefield. He wrote⁶ as follows:

'Two hours, with the aid of the track the men had hewn, brought us to the west end of the lake, where there is a few miles extent of open grassy plain, fringed with woods, intervening between the foot of the great glacier and the water's edge. . . . I wished Nimrod to go with me, but he would not venture on the ice, but told all sorts of stories of sad disasters that had befallen those Indians that ever did so; how that, if they did not get lost in a crevasse, they were at least sure to be unlucky afterwards in their hunting.'⁷ . . . I now saw that the glacier I was upon was a mere extension of a great mass of ice, that enveloped the higher mountains to the west, being

⁵ *Climbs and Exploration in the Canadian Rockies*, p. 68. Collie and Stutfield. Longmans & Co. 1902.

⁶ *Journals, Detailed Reports, and Observations relative to the Exploration of British North America*, p. 110. Captain John Palliser. Folio. London, 1860.

⁷ While the Indians had a few superstitions regarding glaciers and higher mountain regions, they did not live in the mountain fastnesses, and their legends deal more with the plains, with hunting and fishing. This should be contrasted with the Swiss glacier dragons of Scheuchzer and the 'Geister' of the Mer de Glace and Gorner glacier, extant even in 1894.

supplied partly through a narrow spout-like ice-cascade in the upper part of the valley, and partly by the *re-solidifying* of the fragments of the upper *Mer de Glace*, falling over a precipice several hundred feet in height, to the brink of which it was gradually pushed forward. . . . After examining the surface of the glacier, and arriving at its upper end close to the precipice, we struck off to the north side of the valley, to ascend a peak ⁸ that looked more accessible than the others. . . . We had a splendid view over the *Mer de Glace* to the south and west, the mountain valleys being quite obliterated, and the peaks and ridges standing out like islands through the icy mantle. The valley below us is really fed by three great glaciers, but only the one we had crossed fairly descends into and occupies it. . . . The mountains to the north are very rugged, but not so high as those to the south of the valley. In that direction there is one peak ⁹ which has a pyramidal top completely wrapped in snow and at least double the height of where I stood above the valley.'

The Forbes-Lyell Group of mountains comprises the great icefield and peak area of the Continental Divide, in latitude 52, between Bush and Thompson Passes, an air-line approximating twenty miles. On the British Columbia side the South Fork of Bush river flows from Bush Pass, joined by Icefall creek, descending from the cirque between the south-west Lyell glaciers and Bush Mt. Further north, from the Divide, Lyell creek descends to the North Fork. Western streams from Thompson Pass augment the North Fork of Bush river. On the Alberta side Howse river,¹⁰ formed by Conway creek, Freshfield and Forbes brooks—the latter from Bush Pass—flows northward, receiving the Lyell icefield streams, having their outlets through Glacier Lake and Arctomys creek.¹¹ Howse river joins the North Saskatchewan, flowing south from Sun Wapta Pass, the two streams meeting from almost opposite directions. The combined stream flows eastward, receiving Mistaya river¹² at a sharp angle from the south, and makes

⁸ Mt. Sullivan of the Palliser map.

⁹ Mt. Forbes. The names Forbes, Sullivan, and Lyell appear on the Palliser map.

¹⁰ The old 'Middle Fork' of the North Saskatchewan.

¹¹ The 'Valley of the Lakes.' See *In the Heart of the Canadian Rockies*, p. 393. James Outram. MacMillan. 1905.

¹² Also known as Bear Creek, or the 'Little Fork' of the North Saskatchewan. Its source is in Peyto glacier, below Bow Pass.

its exit from the mountains through the mighty portals between Mt. Murchison and Mt. Wilson.

The North Saskatchewan, from Sun Wapta Pass, ten miles above its junction with Howse river, receives its western tributary, Alexandra river,¹³ which rises below Thompson Pass in the northern glacier cirques of Mt. Lyell.

The Lyell and Mons¹⁴ icefields, on the Continental Divide, have a combined area of only slightly less than forty square miles, and separate the group into southern and northern divisions. The chief peaks of the southern area are Mt. Forbes,¹⁵ 11,902 ft., east of the Divide, and Bush Mt.—Rostrum Peak, 10,770 ft.; Icefall Peak, 10,420 ft.—in British Columbia. The peaks of the Divide, beginning at Bush Pass, 7860 ft., are Mt. Cambrai, 10,380 ft., Mt. Messines, 10,290 ft., and Mons Peak,¹⁶ 10,114 ft.

The northern division extends from Mt. Lyell to Thompson Pass, 6511 ft., in the splendid range encircling the head of Alexandra river. Mt. Lyell possesses five peaks—(1) 11,370 ft., (2)¹⁷ 11,495 ft., (3) 11,495 ft., (4) 11,260 ft., (5) 11,150 ft.—of which Peaks (3), (4) and (5) are on the Continental Divide, while Peaks (1) and (2) project eastward. From Peak (3) of Mt. Lyell the Divide continues northward over Mt. Farbus, 10,550 ft., Mt. Oppy,¹⁸ 10,940 ft., Mt. Douai, 10,230 ft., and rises to the abrupt, snowy summits of Mt. Alexandra¹⁹—

¹³ The old 'West Branch' of the North Saskatchewan. The stream is now named Alexandra river below the bend where the streams from East Rice and Alexandra glaciers enter. Above the bend it is known as Castleguard river, arising in the Castleguard tongues of the Columbia icefield and receiving, in its middle course, Watchman creek flowing from Thompson Pass.

¹⁴ The 'Kaufmann glacier' of Outram. (P. 311.)

¹⁵ First ascended in 1902, by Collie, Outram, Stutfield, Woolley, Weed, with Hans and Christian Kaufmann.

¹⁶ 'Mt. Kaufmann.' Ascended, in 1902, by Outram and C. Kaufmann.

¹⁷ Peak (2) was ascended, in 1902, by Outram and Kaufmann, from the bend of Alexandra river, via the eastern Alexandra glacier. It was stated at this time that this was the highest peak of Mt. Lyell. The recent Interprovincial Boundary Survey gives equal heights, 11,495 ft., for Peaks (2) and (3).

¹⁸ 'Gable Peak' of Outram. (P. 387.)

¹⁹ The 'Mt. Lyell' of C. S. Thompson; 'Query Peak' of Outram. The first ascent was made, in 1902, by Outram and C. Kaufmann, via East Rice glacier and Trident Col, which was crossed to the

S., 11,214 ft.; N., 10,990 ft.—thence crossing Mt. Fresnoy,²⁰ 10,730 ft., Mt. Spring Rice,²¹ 10,745 ft., and descends to Thompson Pass from the summit of Watchman Peak, 9873 ft.

The bend of Alexandra river, where it is joined by its head-water from the Columbia icefield, Castleguard river, some seven miles below Thompson Pass, is the camping-place for climbs in the Lyell division. There are joined three glaciers, formerly grouped as 'Trident glaciers,' the northern now known as East Rice glacier,²² while the two remaining have been renamed the Alexandra glaciers. East Rice glacier descends from a snow saddle²³ between Mt. Spring Rice and Mt. Fresnoy; this col may be reached in a few hours from the tongue, and was the basic route in the first ascents of Mt. Spring Rice, Mt. Fresnoy, and the south peak of Mt. Alexandra. The western Alexandra glacier heads in a cirque between Mt. Alexandra and Mt. Oppy, a precipitous wall affording a possible but difficult route to the crest of the range. The eastern Alexandra glacier descends from a snow pass, *circa* 10,000 ft., between Mt. Farbus and Peak (3) of Mt. Lyell, affording passage to the main Lyell icefield above Glacier Lake and, apparently, a logical route for attempts upon Mts. Farbus and Oppy. The glacier fills the northern basin of Mt. Lyell, from which it pours in a broken icefall to a flat bulbous tongue, with few crevasses, turning in an eastward angle and ending near the river.

British Columbia side, intervening slopes and ridges being crossed below the ridge of Mt. Fresnoy, and Mt. Alexandra (S. peak) ascended from the west. The N. peak is still unclimbed.

²⁰ 'Consolation Peak,' ascended, in 1902, by Outram and Kaufmann, via Trident Col, in an attempt upon Mt. Alexandra.

²¹ Outram and Kaufmann, in 1902, ascended a peak, *circa* 10,200 ft., which they named 'Turret Peak,' traversing it from Trident Col to Thompson Pass. This was probably not the present Mt. Spring Rice, but a rocky eminence on the Divide, unnamed on the Interprovincial Survey map, midway between Mt. Spring Rice and Rice E. stations. If this assumption be correct, the first ascent of Mt. Spring Rice should be credited to Hickson and E. Feuz, who, in 1923, reached the summit by way of East Rice glacier and Trident Col.

²² In the moraines of this tongue we found large balls of iron pyrite, similar to those reported by Outram and found by us, in 1922, on the Freshfield icefield. None was seen in either the Saskatchewan or Athabaska moraines.

²³ 'Trident Col' of Outram.

The Columbia icefield, the largest in the Canadian Rocky Mountains, covers an area of almost 150 square miles. It was discovered, in 1898, by Collie,²⁴ who described the view from the summit of Mt. Athabaska as follows:

'A new world was spread at our feet; to the westward stretched a vast icefield probably never before seen by human eye, and surrounded by entirely unknown, unnamed, and unclimbed peaks. From its vast expanse of snows the Saskatchewan glacier takes its rise, and it also supplies the head-waters of the Athabasca; while far away to the west, bending over in those unknown valleys glowing with the evening light, the level snows stretched to finally melt and flow down more than one channel into the Columbia river, and thence to the Pacific Ocean. Beyond the Saskatchewan glacier to the south-east, a huge peak (which we have named Mt. Saskatchewan) lay between this glacier and the west branch of the North Fork, flat-topped and covered with snow, on its eastern face a precipitous wall of rock. Mt. Lyell and Mt. Forbes could be seen far off in the haze. But it was to the west and north-west that the chief interest lay. From this great snowfield rose solemnly, like "lonely sea-stacks in mid-ocean," two magnificent peaks which we imagined to be 13,000 or 14,000 ft. high, keeping guard over those unknown western fields of ice. One of these, which reminded us of the Finsteraarhorn, we have ventured to name after the Right Hon. James Bryce, the then President of the Alpine Club. A little to the north of this peak, and directly westward of Peak Athabasca, rose probably the highest summit²⁵ in this region of the Rocky Mountains. Chisel-shaped at the head, covered with glaciers and snow, it stood alone, and I at once recognized the great peak I was in search of; moreover, a short distance to the north-east of this mountain, another,²⁶ almost as high, also flat-topped, but ringed around with sheer precipices, reared its head into the sky above all its fellows. . . . At once I concluded that these might be the two lost mountains, Brown and Hooker.'

From Thompson Pass, the Continental Divide swings northward across the eastern shoulder of Mt. Bryce,²⁷ 11,507 ft., and, traversing the centre of the icefield, rises to the summit

²⁴ *Loc. cit.*, p. 107.

²⁵ *I.e.*, Mt. Columbia.

²⁶ *I.e.*, Mt. Alberta.

²⁷ Ascended from below Thompson Pass, in 1902, by Outram and Kaufmann.

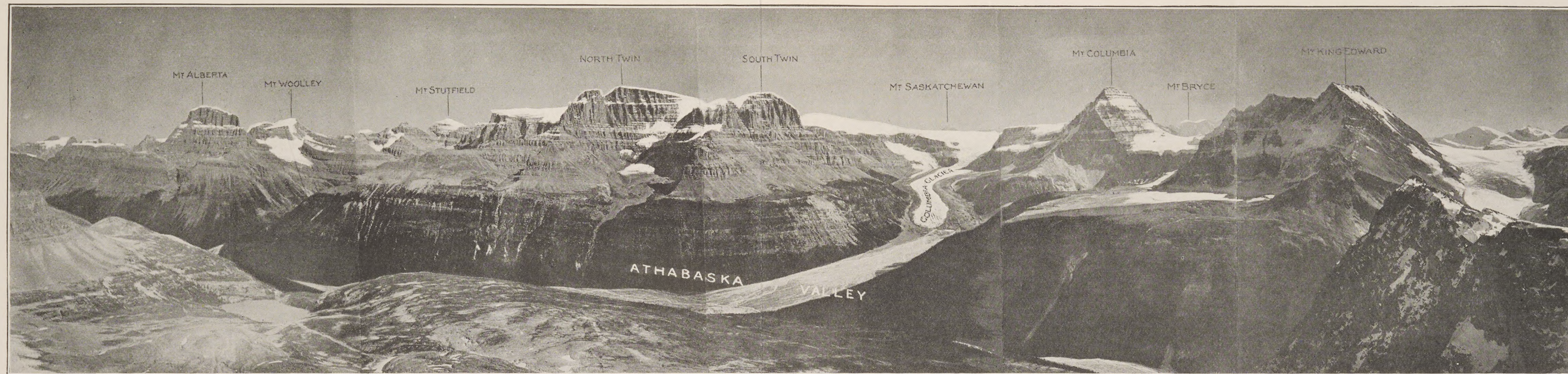


Photo Interprovincial Boundary Survey.

ATHABASKA VALLEY AND PEAKS OF THE COLUMBIA ICEFIELD FROM THE N.E.



Photo Interprovincial Boundary Survey.

THE COLUMBIA ICEFIELD FROM THOMPSON PASS.

of The Snow Dome,²⁸ 11,340 ft., the hydrographic apex of the Saskatchewan, Athabaska, and Columbia river systems. Almost doubling on itself, the Divide then turns sharply southward and westward to the summit of Mt. Columbia,²⁹ 12,294 ft., the second peak of the Canadian Rocky Mountains, and thence to Mt. King Edward,³⁰ 11,400 ft., and Chaba Peak, 10,540 ft., and peaks along the crest of the Chaba basin, dropping to Fortress Lake Pass, 4405 ft.

In the deep valley north of Mt. Bryce, and below Mt. Columbia, three crevassed glacier tongues supply Bryce creek, which joins with Rice brook from Thompson Pass and the glaciers west of Mt. Alexandra to form the North Fork of Bush river and drain to the Columbia. From Mt. Castleguard,³¹ 10,096 ft., the Castleguard glacier tongues form northern sources of Alexandra river, while to the east of Castleguard Valley, minor, separate snowfields supply Castelets and Terrace creeks. Above Terrace Valley rise the shattered, forbidding cliffs of Mt. Saskatchewan, 10,964 ft., filling in the angle between Alexandra river and the North Fork.

The first white men to ascend the North Fork were W. D. Wilcox³² and R. L. Barrett, who, in 1896, crossed from the Saskatchewan to the Sun Wapta on their way to Fortress Lake. On the route, an ascent was made to a spur on Mt. Saskatchewan, from whence a partial view of the West Branch valley was obtained.

Based on information, from T. E. Wilson of Banff, that there was an Indian trail across a pass at the head of the West Branch, the first white man to travel thither was C. S. Thompson,³³ who, in 1900, with one packer, travelled as far as the pass now known as Thompson Pass. No climbing was attempted, bad weather prevailing, but the pass was explored and the northern glaciers of Mt. Lyell visited.

²⁸ 'Dome' of Collie; name revised by Geographic Board of Canada. First ascended, in 1898, by Collie, Stutfield, and Woolley, via the Athabaska glacier, from camp near Wilcox Pass.

²⁹ First ascended, in 1902, by Outram and Kaufmann, via the southern Castleguard tongue and the icefield.

³⁰ Attempted, in 1920, from Athabaska valley, by Carpe and Palmer, who attained 10,800 feet on the western arête.

³¹ Ascended, 1919, by the Interprovincial Boundary Survey. Other ascents made by the Survey include Arctomys and Watchman.

³² *The Rockies of Canada*, pp. 137, 152. W. D. Wilcox. Putnam, 1909.

³³ *Appal.* ix. p. 372.

The chief source of the North Fork is from the Saskatchewan glacier, swinging eastward from the Columbia *névé* through the gateway between Mt. Castleguard and the fine unnamed snow peaks immediately west of Mt. Athabaska, in a spectacular ice river more than seven miles long and ending in a broad tongue without terminal moraine. North of Mt. Athabaska,³⁴ 11,452 ft., a similar tongue, the Athabaska glacier, supplies the Sun Wapta, Sun Wapta Pass, four miles south-east of Wilcox Pass, dividing ultimate sources of North Saskatchewan from Athabaska drainage. Near by a large dirt-covered tongue, Dome glacier, extends north-east from the Columbia *névé* and also drains to the Sun Wapta, its terminus being close to that of the Athabaska glacier.

The northern margin of the Columbia icefield is bordered by the broad snows of Mt. Kitchener,³⁵ 11,500 ft., and The Twins—South Twin, 11,675 ft.; North Twin, 12,085 ft.—the latter the third of triangulated peaks in the Canadian Rockies. Between The Twins and Mt. Columbia a magnificent precipitous cirque contains the plunging, banded Columbia glacier and the tongue from The Twins, draining to the main Athabaska river.³⁶ The Twins and Mt. Kitchener, grouped with peaks further north, Mt. Stutfield, 11,920 ft., Mt. Woolley, 11,170 ft., Diadem Peak,³⁷ 11,060 ft., and Mt. Alberta, 11,874 ft., make up the gigantic massif in the wedge between the Sun Wapta and the Athabaska rivers.

ROUTES AND ASCENTS.

As no one, for many years, had visited the Thompson Pass area with climbing purpose, and as there remained an unclimbed twelve-thousand-foot peak on the Columbia icefield, many of us, seeing it from afar, had been attracted toward the region.

On June 27, 1923, the climbing party—Dr. W. S. Ladd, the writer, and the well-known guide Conrad Kain—left Lake

³⁴ First ascent, 1898, by Collie, Stutfield, and Woolley, from Wilcox Pass; second ascent, 1920, Hickson, Reford, and E. Feuz. (*C.A.J.* xii. p. 37.)

³⁵ 'Mt. Douglas' of Collie. (P. 121.)

³⁶ The old 'Western Branch' of the Athabaska. It was from the depths of this valley that Habel, the German explorer, in 1901, first saw pyramidal 'Gamma,' since identified as Mt. Columbia. (*Appal.* x. p. 34.)

³⁷ Ascended, 1898, by Collie, Stutfield, and Woolley, from the Sun Wapta.

Louise with twenty horses, under the leadership of James Simpson, who, twenty-one years before, with Outram, had visited the icefield.

Our expedition reached Hector Slide camp in less than five hours, favoured with clearing views of the Bow Valley and the Lake Louise peaks, next morning making the short journey to Bow lake. Fisherman's luck here yielded several small trout for the frying-pan, but the Bow icefall, tumbling almost to the water, the light and shadow playing down the lake, afford a setting which makes many an Izaak Walton oblivious to his sport.

June 29 found us crossing the flowering meadows of Bow Pass, a ride of little more than four hours taking one into the Mistaya valley, with an extensive panorama from Mt. Chephren to the peaks about Nigel Pass, to camp ground between Wild-fowl lakes. There we pitched tents, the nest of a ruby-throated humming-bird on a twig above our door, and wandered along the lake shore watching the antics of harlequin duck, diving and disturbing with ripples the reflection of majestic Howse Peak and the jagged ice-hung wall of the northern Waputiks.

Between the lakes one easily fords the Mistaya, the trail passing through Pyramid Slide camp, where horse-feed is scarce, and on, in five hours, to the main North Saskatchewan river. It is a day to remember: the Murchison towers and pinnacles rising across the river canyon; pack-horses splashing through flower-bordered pools and sloughs; rushing, sparkling streams above which rise sky-soaring Mt. Chephren, ice-hung Kaufmann Peaks, and the rock wall of Mt. Sarbach filling in the Mistaya-Howse river angle. And then the long Saskatchewan ford as a climax, where, if one is unlucky, there will be swimming and wet packs; a fascinating stream flowing to far-distant Hudson Bay, but here broken by gravel bars into shallow rapids through which the horses struggle, while their riders attempt vainly to photograph; keep in line, admire the great spire of Mt. Forbes, and remain dry-shod.

The camping-ground, at the junction of the North Fork, Howse and Mistaya rivers, is one of greatest beauty, a panorama strangely suggestive of the Oberland peaks from Grindelwald, where one might pleasantly spend many days. Morning came, filled with colour, a spent moon hanging above Mt. Forbes and its miniature, Mt. Outram; we followed the North Fork trail under the unbroken cliffs of Mt. Wilson, through fine timber, cedar and cottonwood, with bars of sunlight shafting

into the forest darkness. Then out again on meadows, with little meandering streams where fish dart, and quiet pools which mirror the snowy eastern face of Mt. Saskatchewan, guarding the portals of Alexandra river.

Camp-ground, at the foot of Pinto Pass,³⁸ between Mt. Wilson and Mt. Coleman, opposite the mouth of Alexandra river, is known as 'Graveyard,' because of sundry hunting relics which once adorned it. From the gravel bar, covered with magenta fire-weed, one may walk, in a short three hours, up trail to Pinto Pass and thence out to a high forget-me-not-covered bench on Mt. Coleman, commanding a widespread and splendid panorama of the North Fork, from Bow Pass to Nigel Pass, and of Alexandra river. Here, with the winding streams and towering mountains—Wilson, Chephren, Willerval, Alexandra—as a setting, we watched three sheep walk up a near-by ridge and disappear, while evening light silhouetted the jagged pinnacles—the slender northern ridge tower known as the 'Lighthouse'—of Mt. Saskatchewan.

THE NORTHERN LYEYLL BASIN.

In little more than four hours one may travel up Alexandra river to the bend, in a valley rarely visited by white men. We passed by Outram's Camp Content, forded, and a short distance further on, close to the glacier tongues, named our stopping-place, for obvious reasons, 'Last Grass Camp.' Mt. Oppy and Mt. Alexandra raise their ice-crests above this spot, with the northern Lyell basin close at hand. It was our intention to attack this basin in the hope of attaining the Lyell-Farbus col and the unclimbed Divide Peak (3), 11,495 ft., of Mt. Lyell, equal in height to the central Peak (2), 11,495 ft., ascended by Outram. There also one might traverse the arête of Mt. Farbus, and across a steep little col reach Mt. Oppy, peaks well guarded by icefalls above the Alexandra glaciers.

But weather was ever unkind. After two damp visits to the lower ice, we ascended, on July 4, a cloudy morning, in three hours, into the northern Lyell basin. Our route was by the eastern Alexandra glacier, crevasses in the middle of the ice-fall soon forcing us to the eastern moraine, a direct ascent to which is unpleasant because of cliff and running water. We

³⁸ North Fork to Cataract river.

made a little fire on a bit of meadow at 7000 ft., where camp might be established, for several hours watching the snow tops play hide-and-seek in the fog, and patches of light wandering across the banded glacier tongues. In drenching rain we descended to camp, where a roaring fire and fresh bear-meat comforted us. The basin offers great climbing possibilities and should be revisited.

CASTLEGUARD CAMP.

Next morning we moved up Castleguard river, passing Outram's Camp Columbia, with its surprising waterfall, and rode up the Survey trail to camp-ground above 7000 ft., in the meadows below Mt. Castleguard and its ice tongues. Here, indeed, is the spot of which wranglers dream: plenty of water, wood everywhere, horse-feed for months, and the cayuses can't get away! Castleguard Camp fulfils one's idea of Alpine Paradise. A meadow, acres of it, with a heather carpet and flowers beyond description; little cascading streams; a tiny canyon, where leaps an arching waterfall, with the peaks of Lyell above. Can you imagine it at evening? Smoke from the camp-fire rising through tall trees beside the tents; horse-bells sounding in the distance; snow summits of Lyell turning heliotrope and violet; shadowed walls of Castleguard Valley seen to the bend; Watchman Peak, with Thompson Pass patched by sunlight, and glimpses of far-away ranges in the west; Mt. Bryce, stupendous, its icy peaks silhouetted and incandescent; the low southern Castleguard tongue brilliant with light reflected from the Columbia icefield; Mt. Castleguard itself, and Mt. Athabaska, at the valley head, old-rose and golden. One despairs in the telling of it. It is a place to which one will return.

From camp, one is but a short distance from Thompson Pass. Two hours' walk to the valley head leads over a low divide to the Saskatchewan tongue, whence Mt. Athabaska could be climbed. East of camp, a range of minor peaks, of which Terrace Mt., 9570 ft., is the chief, separates Castleguard from Terrace Valley. It is easy to cross a low snow pass on the southern slope of Athabaska S. station, and reach meadows below Mt. Saskatchewan. Finally, in two hours, one may ascend the central Castleguard glaciers to the eastern ridge of Mt. Castleguard, at 9000 ft., whence a route to the summit is obvious; or, what is of equal interest, one may circle to the north-west and attain the Columbia *névé* without having crossed

a single crevasse of any size. As many of the icefield climbs are of great length, the gaining of altitude and the avoidance of icefalls is an immense advantage over Outram's route to Mt. Columbia by the low southern Castleguard tongue or Collie's attempted route through the crevasses of the Athabaska glacier.

MT. CASTLEGUARD : FIRST TRAVERSE.

On July 6, we traversed Mt. Castleguard, 10,096 ft., taking up the entire party, including Simpson, our cook, and our wrangler. Above the eastern ridge are short stretches of steep snow, the summit being attained in four hours from camp. The mountain dominates the head of the Saskatchewan glacier and affords perhaps the finest views of the Columbia icefield, which stretches endlessly westward to Mt. Columbia, and northward to The Twins. Mt. Bryce is close at hand, and, across the Bush Valley, distant ranges appear, the Selkirks and peaks along Wood and Canoe rivers. Southward, the panorama embraces the Alexandra-Lyell angle and the great snow-fang of Mt. Forbes. Two hours on the summit flew rapidly, and we descended the northern snow ridge in exciting glissades to the icefield, marching two miles toward Mt. Columbia, breaking trail for future use. It was a day of enjoyment for all, although the disappearance of our cook in a small crevasse frightened us badly.

Next day, the climbing party again ascended the Castleguard shoulder, hoping to reach Mt. Columbia, but snow squalls prevailed and drove us back to camp.

TERRACE MT.: FIRST ASCENT.

On July 9, in threatening weather, Conrad and the writer made a little first ascent of Terrace Mt., 9570 ft., by its southern glacier and the snow col at its head. The glacier is small but of great interest because of the curious wind-blown snow ridges and the fact that the surface supports no less than twelve lakelets, interconnected by ice tunnels. From the col, the south ridge is ascended without difficulty and the corniced summit reached in three hours from camp. It is perhaps the most satisfactory of the easy view-points in the vicinity: the Columbia icefield stretches ahead like a map, while the overlook to Mt. Saskatchewan served us well a few days later.

NORTH TWIN: FIRST ASCENT:

On July 10, the climbing party left camp (3.20 A.M.) for the great prospective prize of the journey, the first ascent of North Twin, 12,085 ft., the third of the triangulated peaks of the Canadian Rockies, and the loftiest summit entirely in Alberta. We reached Castleguard ridge in two hours (5.30), rearranged baggage, and started again (6.00). New snow had fallen during the preceding days, and this is the story of how we came to know the Columbia icefield. It is a simple story: we saw our peak, walked toward it, up it, and back again. There was only the distance. The peak is approximately twelve miles from the Castleguard shoulder and appears amazingly near. It deceived us all, including Conrad, who had had much experience with New Zealand and other fields. One descends 400 ft. into the depression at the head of the Saskatchewan glacier. Thence a long and gradual rise toward The Snow Dome, hiding our objective summit behind its southwestern slopes, brings one past the head of the Athabaska glacier, down which one catches sight of Nigel Peak. But it is not done in a moment, and, after hours taken to round slopes of The Snow Dome, one is only half-way to North Twin. This is not easily realised; the peaks loom close at hand and level snow hides many depressions. It is necessary to circle widely in avoiding crevasses at the head of Columbia glacier, sloping into the Athabaska basin. The Twins are an isolated pair, ringed about by icefall and cliffs dropping precipitously to the Athabaska, North Twin alone being connected with the icefield by a snow col between the head of Habel creek and the southern glacier descending from North Twin toward Mt. Columbia. And then, after heart-breaking hours, when one has crossed the last deceptive slope, one must lose several hundred feet of altitude. Before crossing the col, we made the first stop, for lunch (2.00-2.15). Across the head cirque of the Columbia glacier rise Mt. Columbia and Mt. King Edward above cliff benches and ice terraces, the pinnacled walls of South Twin towering to a sharp peak, snowy and inaccessible from the icefield save by the connecting col to North Twin. Framed by North Twin and the snow humps of Mt. Stutfield, the valley of Habel creek affords views of cliff-ringed and unclimbed Mt. Alberta.

The climb from the col leads up 1500 ft. of steep snow, which at times will be icy. We reached the summit (4.20) thirteen hours after leaving camp; fog was blowing over from

the west and enveloped us just as Mt. King Edward came into sight above South Twin. On top, we had fleeting glimpses of the river valleys westward, peaks to the north-east were visible for a few moments, and then the mists closed down. We remained twenty minutes on the summit; it was warm, and we hoped for a better view which never came. We descended to the col without incident (4.40-5.40); we had made the first traverse of the Columbia icefield, from Castle-guard Valley to the head of Habel creek, and we had bagged the last of the untrodden 12,000-ft. peaks of the Canadian Rocky Mountains.

No one who does not follow in our track will quite understand that journey back across the endless icefield. The exhausting first half-hour in a little blizzard, obscuring the trail twenty feet ahead; clearing, with a crimson, gold, and orange sunset banded against lead-blue storm-clouds behind The Twins; the unearthly light in the snow banners and mist about Columbia; the soft rosy haze filtering into the distant Selkirks, lifting them up and making them unreal. We were too tired to appreciate it, plodding on and on, in deep, insufficiently crusted snow, over plateau and ridge and dip, until darkness came. The field is so huge. In one corner the stars were out; in another, beyond Mt. Athabaska, dark clouds hung and lightning flashed. We lit our lantern and went on through the night, pulling into camp at last, with morning light upon the hills as it had been twenty-three hours before when we departed.

MT. SASKATCHEWAN: FIRST ASCENT.

We recovered quickly after a day in camp, and, on July 12, successfully accomplished the first ascent of Mt. Saskatchewan, 10,964 ft., that formidable appearing and long-sought guardian of the West Branch.

We knew the mountain well before starting, having seen its eastern face from the slopes of Mt. Coleman, its south-western face and bounding ridges from Mt. Castleguard and from Terrace Mt. It is a huge sky-cleaving wedge, in contour triangular, the plunging, jagged, N.E. ridge supporting the Lighthouse and other pinnacles; the eastern and northern faces snowy and unbroken. The south-eastern ridge offers a possible though difficult route from Alexandra river, with much timber to be overcome, and a deep break in the rock below the summit arête. The N.W. ridge, with many gendarmes, is not attractive, thus leaving only the south-western face, rising

above Terrace creek. A slanting, subsidiary ridge descending, north of the summit, into the valley, breaks this face into an eastern and a western cirque, the eastern being the larger and least precipitous. From Castleguard camp we reached the snow pass below Athabaska S. station (5.00-7.00), and crossed meadows of Terrace creek to the south-western face. Entering the western cirque of this face, over scree and winter snow, we came close to a herd of five goat and several kids, who scurried off across the subsidiary ridge. A conspicuous, snow-filled couloir breaks into the cirque from the ridge and leads one, with some three hundred feet of scrambling, to the crest between the eastern and western cirques; the goat did it much more gracefully and rapidly than we. One follows the scree to the first cliff belt, under which it is easy to traverse eastward into the larger cirque in which the remainder of the ascent was made. The first cliff belt, about forty feet, was surmounted by two slabby chimneys, the uppermost containing a goodly stream of water; these chimneys are about 250 feet east of the subsidiary ridge, and we crossed some bits of steep snow to reach them. Under the second cliff belt, we traversed several hundred feet east in the cirque, again finding a chimney which led upward.³⁹ Traversing short distances further east, we reached 10,000 feet in the cirque, at a point below and north of the summit. Nearly three hundred feet of steep, wet scree, in down-tilting strata, was next ascended and the remaining distance to the summit arête made in snow. The snow was soft and pitched steeply, but the cliffs were well covered. It was hard work, and, once or twice, small superficial avalanches went down behind us. Once on the arête (2.40), it became apparent that the point we had aimed for was not the highest, but that the true summit lay several hundred yards further east. To reach it required attention to the cornices which overhang the northern face, and there was a bit of good rock-scrambling at the very finish (3.00).

The North Fork and Alexandra river form a huge sparkling angle below; with care, we looked down the northern wall to the Lighthouse tower almost under us; a sea of peaks was everywhere. We built small cairns, leaving a record of our

³⁹ A direction cairn was built on a small buttress at this point, and may be of service to future parties. Examination of photos by the Interprovincial Survey leads one to believe that the snow of the cirque is not permanent, and that later in the season the amount of rock work is greater than we encountered.

North Twin ascent as well—there had been no visible rock outcrop, on its summit—and started down (3.30). We had barely gotten off the snow pitches when a thunder-shower swept over and accelerated the descent. Going with all speed, we were soon on the meadows (6.00), whence, after a bite to eat, we rounded the valley head, crossed the snow pass (7.40), and returned to camp (9.00), just sixteen hours after our start.

On the following morning, none the worse, we rode over to Thompson Pass, enjoying the reflections of Watchman Pk. and Mt. Spring Rice in the summit lakes. One is close under the southern cliffs of Mt. Bryce, which descend into the depths of Bush Valley.

MT. COLUMBIA : SECOND ASCENT.

On July 14, we carried out the second ascent of Mt. Columbia, 12,294 ft., the second in altitude of the Canadian Rockies. The climbing party derived added pleasure in including Simpson, who had been with Outram, but had not climbed, at the time of the first ascent twenty-one years before. Reaching the Castleguard shoulder (3.50–5.30), we found the snow in fine condition and rapidly traversed the tracks made some days previously. Weather was perfect, although the wind blew forcefully. Air currents, from the British Columbia side, are quite constant, and carry thousands of insects up on the ice; at 10,000 feet and above, we found many varieties of moth, bugs and beetle, most of them alive but torpid from cold. These insects serve as the principal food supply of a large number of snow-finches which are seen darting about on the icefield.

Far out on the icefield, a deep crevassed snow saddle, between the heads of Columbia glacier and Bryce creek, was crossed, and we had lunch (10.15) on flat snow above, looking across at our friendly deceivers The Twins. Then up to the bergschrund, easily crossed, and the steeper snow beyond. At 11,000 feet we roped, stopping by a trickle of water—there had been none on the North Twin ascent—on a small rock outcrop. We were in the centre of and more than half-way up the great eastern snow face, practically treading the Continental Divide. The pitch steepened, step-cutting was occasionally required, and wind tore up the snow crust until the air seemed full of flying white shingles. Traversing slightly northward to avoid the cornice, we were soon shaking hands on the summit (1.30).

Time is insufficient on such occasions to comprehend the complex topography of all that we overlooked, and words fail. We were above the sources of four mighty rivers, Saskatchewan,

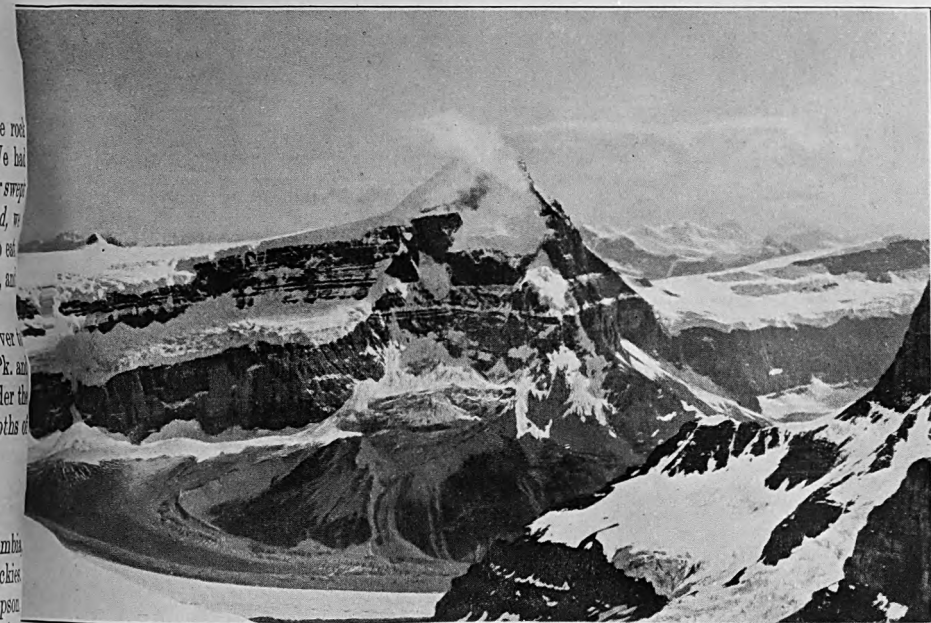


Photo J. Monroe Thorington (Group B. No. 4).

MT. COLUMBIA AND COLUMBIA GLACIER BASIN FROM SLOPES OF N. TWIN.



Photo J. Monroe Thorington (Group B. No. 1).

N. SASKATCHEWAN VALLEY, LOOKING FROM SLOPES OF MT. COLEMAN
TOWARDS BOW PASS.

Athabaska, Columbia, and, not far away, the Fraser ; surely one of the world's greatest watersheds. How shall one describe a panorama extending from peaks north of Mt. Robson to summits south of Bow Pass ; from ranges west of Wood and Canoe rivers to unnamed groups eastward on the Brazeau and Cataract ? Range upon range appeared before us : the Selkirks ; the Bush-Wood river watershed, with Mt. Clemenceau looming ; peaks between Wood and Canoe rivers ; northward, peaks of Jasper Park, Geikie and Edith Cavell, and afar, Robson ; north-east and east, jagged peaks near Maligne lake, shining in new snow ; rock towers down the Cataract river ; southward, Mt. Forbes, Mt. Lyell and a host of others. The foreground is the widespread icefield, Mt. King Edward and The Twins seemingly far below. But one retains chiefly the impression of rivers, sparkling in the sunlight, flowing to three oceans. The eye follows the wild gorge of Bush river, dominated by Mt. Bryce, tracing it nearly to the Columbia. Eastward, across the icefields, are Saskatchewan sources, finding exit between Mts. Wilson and Murchison. One gazes into the abyss of the Columbia glacier and down the Athabaska Valley, past The Twins and Mt. Alberta, into the distant north. Forty minutes were spent on the summit, and fifteen more, out of the wind, on a level spot below the cornice. The top of Gamma !

Let no one think that Columbia is a mere snow hump rising from a *névé*. It is a distinct peak ; it looks its height and is quite worthy of its place. Simpson intends to climb it every twenty-one years from now on !

Return to Castleguard shoulder (2.30-7.00) was made in good time, softened snow permitting a rapid though cautious descent of the face. Sunset illuminated the icefield in a radiant golden sheen, the last lights, as always, filtering down through the Selkirks and intensifying their altitude. In a little while (8.30) we were back at the camp-fire.

CASTLEGUARD AND SASKATCHEWAN PASSES.

Two days later, July 16, Simpson carried out a long-cherished plan of taking horses in direct passage, by way of Saskatchewan glacier, from the Thompson Pass area to Wilcox Pass. Castleguard river heads in a low divide,⁴⁰ 7,600 ft.,

⁴⁰ To identify the route, and because of the dominating peak, the name 'Castleguard Pass' is suggested for the pass between the head of Castleguard Valley and the Saskatchewan glacier.

which was crossed to the middle course of the Saskatchewan glacier. The horses were taken on to the flat ice, close to a tiny marginal lake nearly opposite Mt. Athabaska. In descending the glacier with horses, it is advisable to remain on or near the south lateral moraine, taking to the ice only to avoid, some distance down, a side glacier entering from the south. About four miles of the glacier was descended and camp made below the tongue, on the southern side, near a pleasant waterfall. There is also a suitable camping-place on the north side, just opposite, with a small lake on a timbered bench above the gravel flat.

The glacial stream flows down a deep little canyon, with a natural bridge, making direct entrance with horses almost impossible. There was no evidence that any other party had ever stopped with horses at our Saskatchewan Glacier Camp.

On the next morning, without difficulty and no cutting, we took the horses northward, in four hours, over a meadowed saddle,⁴¹ *circa* 7500 ft., on the eastern shoulder of Mt. Athabaska, and made a direct descent to Sun Wapta Pass, the true Saskatchewan-Athabaska divide, whence trail was followed to Wilcox Pass.

Camp was made by a stream not far from the Athabaska glacier, the tongue spreading, with only a small terminal moraine, close to the trail. It descends from the Columbia icefield in three icefalls, through the gap between Mt. Athabaska and The Snow Dome. The ice ends in a flat fan, its stream to the Sun Wapta augmented from the fall of Dome glacier, plunging between the ice-crowned cliffs of The Snow Dome and Mt. Kitchener, and ending in close proximity. Three lakelets are found near the trail, reflecting the snows of Mt. Athabaska. The shores are alkaline, covered with recrossing game tracks, and, on our first walk, four sheep bounded away and up the slopes of Wilcox Mountain. Several days later the cook served bear-meat which could not be distinguished from mutton.

MT. ATHABASKA : THIRD ASCENT.

On July 19, the third ascent of Mt. Athabaska, 11,452 ft., was made by the north glacier and north-west arête. Under

⁴¹ The name 'Saskatchewan Pass' is suggested, as indicating the only feasible route for horses from the Saskatchewan tongue to the North Fork.

favourable conditions there is not the slightest difficulty, and even on a wretched day the climb was rapid (8.00–1.30). On the summit it was snowing hard, giving us only an occasional glimpse of Saskatchewan glacier; if Collie had had our weather, the Columbia icefield might not have been so readily discovered.

Descent was made by the north-west glacier to the Athabaska glacier, a variant of former routes, but repaying, as the north-west glacier possesses a magnificent icefall which may be closely approached.⁴²

Our programme in the north was now complete as far as weather had permitted. North Twin, Saskatchewan, Columbia, Athabaska, and lesser peaks were ours.⁴³ We had made a complete crossing of the Columbia icefield and had taken horses by a direct route from the West Branch to the North Fork. North Twin, 12,085 ft., in distance had been a climb of thirty-three miles; Saskatchewan, 10,964 ft., seventeen miles; Columbia, 12,294 ft., twenty-six miles. These three ascents, made within five days, perhaps constitute, if there be any honour in it, a new long-distance and altitude record in Canadian mountaineering.

On July 20, camp was broken, and in seven hours descent made of the 'Big Hill,' past Panther fall, with a fleeting glimpse of the north face of Mt. Saskatchewan, to Graveyard Camp. Next day we travelled to the Forks, making the ford without difficulty and enjoying an afternoon bath in the warm, shallow lake below Mt. Murchison. The old route was followed to Wildfowl lakes and Bow Pass. A repaying hour from the pass leads to a rocky bluff above the ultramarine waters of Peyto lake, with a view of the glacier and its ice arch; one follows

⁴² A fine trilobite fossil was found in this basin, the only one we saw in the North, although shell and other fossils occur near by, notably below the summit of Nigel Peak.

⁴³ Of any of the icefield climbs, it can only be said that difficulties will vary greatly with the snow conditions. At times, skis or snowshoes would be useful. The finest unclimbed peak of the icefield is now South Twin; it will be very long if climbed directly from Castleguard Valley, the only approach from the icefield coinciding with our route to North Twin. The lower slopes of North Twin must be crossed if South Twin is to be climbed from the icefield; it will perhaps be necessary to camp on the icefield itself or descend into the valley of Habel creek. As for other unclimbed peaks, Kitchener and Stutfield, from the icefield side, are merely long snow-walks.

the course of Mistaya river to the Saskatchewan Forks, beyond which Mt. Wilson's snows are plainly visible.

At Bow lake we left the horses, on July 24 ascending beside the Bow icefall to the Waputik *névé* and by Vulture Col to Mt. Gordon, 10,336 ft. (5.00-12.45). There was cloudless weather and we again saw our old friends in the north, from Freshfield to Columbia. Across the Balfour glaciers the view sweeps over Hector lake to the Lake Louise peaks and down to the Yoho Valley, into which we descended.

But Jupiter Pluvius would not let us go free. Yoho glacier has retreated, so that it is no longer possible to cross the stream on the ice tongue. A violent cloudburst assailed us; water rose and bridges went out. After an hour spent on the rope in a vain attempt to ford Yoho river we were obliged to cross the canyon lower down, on a log which seriously damaged water-soaked clothing. We built a rickety bridge of logs across the Twin Falls stream and arrived at Takkakaw Camp as daylight was failing.

Journey's end! But what memories of peaks and ice-fields, sunset and smoke of camp-fire, laughter and song! Youth on horseback, in the midst of a little sparkling ford, playing a mouth-organ; mountain spires dim blue in the noon haze.

Our return eastward by rail, made through the valley of North Thompson river, leads, past many a forgotten cabin, to Robson, Yellowhead Pass, and beyond. There, with but little imagination, one may dream until the puffing locomotive is forgotten, and in every wooded cove one half expects to see the Headless Indian⁴⁴; or, just around a bend, the tragi-comic starving party of Milton and Cheadle, the Assiniboine, and mysterious Mr. O'B. mounted on Bucephalus, straggling down to Fort Kamloops.

The frame of mind is perhaps akin to that of childhood, when a belief in fairies was implicit. But in such wise is it best to visit these far-away peaks of the Canadian North: it is not without reward.

NOTE.—It is hoped by the kindness of Dr. E. Deville, Surveyor-General for the Dominion of Canada, to publish in the next JOURNAL the Boundary Commission's maps Nos. 21, 22 and 23.

⁴⁴ Cf. *The North-west Passage by Land*, Viscount Milton and Dr. W. B. Cheadle. Cassell, Petter, and Galpin, London. 1865. This entertaining volume contains apparently the first reference in literature to Mt. Robson.

THE COLUMBIA GROUP AND ROUND BOW PASS AND LAKE
LOUISE IN 1923.

By J. W. A. HICKSON.

(Communicated by Mr. de Villiers-Schwab.)

MR. AIMÉ GEOFFRIM and I, with Edward Feuz, spent almost four weeks between Lake Louise and the head of the N. and W. Fork of the Saskatchewan River: July 23 to August 19 of this last season. Persistently bad weather interfered greatly with climbing plans and prevented our attempting Mt. Columbia, or any peak of the Columbia icefield. After a couple of minor ascents from a camp at almost 6500 ft. near the Athabasca Glacier, where we experienced three heavy snow-storms within five days, we moved down the N. Fork and up the W. Fork (now known as Alexandra River), and Castleguard Creek to Thompson's Pass. From here the easy Watchman's Peak was ascended, and an attempt made on Mt. Springrice, 10,745 ft. Mt. Bryce, which we had hoped to ascend, appeared to be in an unclimbable condition owing to fresh snow.

After returning to a camp near the Alexandra Glacier, Feuz and I climbed Mt. Springrice on a stormy day, and regard this as a first ascent, since we did not find any traces on it of earlier mountaineers in this region. The glacier, East Rice, below Trident Col (Sir James Outram's designation) was difficult to ascend.

On the return journey to Lake Louise we made a longer stop at Bow Pass, about 6800 ft., explored Peyto and Wapta icefield lying to the W., and ascended a peak, Mt. Rhondda, over 10,000 ft. on the divide between Alberta and British Columbia, and immediately S.E. of Mt. Baker. There was no indication of any cairn on the rocky summit ridge which we traversed, but some hundreds of feet lower down there was a small stoneman. Two days later, Feuz and I climbed Mt. Hector, 11,135 ft. At 10,000 ft. we noticed several flocks of snow-finches, doubtless attracted by dead and paralysed beetles, mosquitoes, and other flies which were closely strewn on parts of the glacier.

A week after our return to Lake Louise, Feuz, his brother Walter, and I went by midnight train to Hector, whence we walked up the valley of Cataract Brook for some three miles,

crossed the stream on trees, which the guides felled, and made our way to Cathedral Crags, 10,083 ft., which had been tried unsuccessfully a couple of years before by Edward Feuz and myself. All is simple going until the rock wall is reached on the E. side (rather than on the N. according to Outram), at some 450 to 500 ft. below the highest tower. Here the glacier has greatly shrunk and things are much changed in twenty years, since Outram's first ascent. According to the picture in his book, 'In the Heart of the Canadian Rockies,' p. 173, the snow extended well up into, indeed almost to the top of, the couloir, by which alone it seems possible to make an ascent. Now one cannot reach this couloir directly from the snowfield. It is quite dry, very steep, and at some 50 ft. above its base presents a formidable obstacle in the shape of an overhanging rock. At this place the handholds are scanty and slight. A couple of hours were spent in making 70 ft. On the way down the guide managed to fix a second rope that we had brought in anticipation of trouble, and we had an experience, the only one last season, of *Abseilung*.

[This district is shown in the outline map in the 'Climbers' Guide to the Rocky Mountains of Canada,' by Mr. Howard Palmer and Dr. J. Monroe Thorington.]

ROCK PEAKS AND SNOW PEAKS, 1923.

By T. HOWARD SOMERVELL.

WHILE tramping among the Himalayas last year, in spite of the fine scenery and the interest of the unknown, one was constantly longing for some real climbing. 'This may be mountaineering, or exploration, but it isn't climbing,' one was constantly saying to oneself. Accordingly, endeavouring to get a good contrast, my brother and I went this year to the Dolomites. We knew we should find plenty of climbing there, and, in order to get in the mountaineering side as well, we naturally eschewed guides, except for the printed variety (the excellent 'Hochtourist,' vol. iii.). We really didn't do anything very wonderful, but had a first-rate good time, which after all is the chief (perhaps the only) object of a holiday amongst the mountains. Before the arrival of my brother, F. S. Smythe and I did a few climbs, beginning with the Kleine Zinne, which

may or may not be dull for a guided party, but which afforded quite an amusing little expedition for a couple of amateurs. The chimney near the top, named after Zsigmondy, is much the best part and almost raises the standard of the climb to what a British trained climber would class as 'difficult.' The deserted paraphernalia of war all around, and the way every little overhang had been used as a bivouac, added much interest to the climb, but made us fairly certain that somebody had been there before, a conjecture which the thousands of names in the book on the summit proved to be probable. Altogether, a very sociable little peak after the lonely Himalayas.

Our next climb was the traverse of the Croda da Lago, going up by the Pompaninkamin, on the W. side of the mountain. The Reichenberger hut, now tactfully (?) rechristened *d l'Italienne*, is very comfortable, and its proprietress most kind. So our start had to be delayed for the elaborate breakfast she insisted on preparing, and it was after eight o'clock when we began the climb. One has to cross to the E. side of the ridge and go down 1000 feet or so before the starting-point is attained, and it was more by good luck than good management that we began the climb in the right place. The bibulous nature of the parties that had preceded us during the last few years proved a blessing, and the climb starts from a bottle-decked ledge. For several hundred feet it is easy, leading up a subsidiary buttress to the main mass of the mountain where the difficulties begin. There is a good chimney, a delightful and very exposed 100-ft. traverse to the right, another chimney, another short traverse of considerable difficulty, and an easy gully, leading in a short time to the foot of the Pompaninkamin. This is a vertical, smooth-sided rift, smaller than the Schmittkamin and rather more interesting, one pitch being quite a struggle. At the top some loose chock-stones must be treated with that respect which amounts to complete aloofness, rather a difficult business; but there is a good resting-place above them. A traverse to the left leads one to the N. ridge of the peak, whence the summit is reached by an overhang of remarkable soundness which alone renders it possible. The rock scenery of this route is very fine, and in the middle distance the S. face of the Tofana is a magnificent sight. We had little difficulty in climbing down the ordinary way, though more than a little in finding the route. Following downwards a climb which is described upwards in an unknown tongue is not always very easy,

but is quite amusing to one who is uncertain of the difference in German between a ridge and a gully. Perhaps the French will remedy this defect by making the Germans realise that there is such a thing as having to climb down.

That evening I was eating a twopenny ice in Cortina, when I was surprised to see my brother; a fortunate encounter, as I was going to meet him in Toblach next morning, and we might have wasted several valuable days looking for each other. We sped on to Pordoi the next day, where (after two days in a tiny inn) we were honoured by being the first visitors in the newly repaired Christomannoshaus. While sojourning there we climbed the Fünffingerspitze by the Schmittkamin, and also the Third Sella Tower; neither is very hard, but the Tower is quite an amusing climb, with a spiral staircase round it, from the far end of which a broken ridge led us (in a thunderstorm) to the top. Both of these climbs were done in rain, the only bad weather we got on our holiday.

On the way to Pordoi we had passed the scene of the tremendous rock-avalanche by which the Italians destroyed a trench-full of Austrians, blowing up (or rather down) the whole side of a mountain; but as we approached San Martino the devastation of war was more impressive even than that, so widespread is it; for miles on either side of the Rolle Pass there are no buildings left at all, though few of the Tyrolese towns are so badly shattered as Ypres or Bapaume. The San Martino Dolomites are in many ways the most striking, and one felt sorry to have spent four years on the Western Front when one might have fought under the shadow of the wonderful Cimone della Pala, the most impressive mountain, in some ways, in the whole of the Alps. My brother and I took the W. face of the Rosetta as our first climb; starting at 2 P.M. from our hotel in San Martino, we clambered up easy rocks until 300 feet or so from the top, and thence struggled up the right-hand chimney of two which lead to the summit. The chimney is quite hard in places, and almost to be classed as 'severe.' We just arrived on the highest point of the Rosetta in time to see a truly marvellous sunset of orange and purple, and half an hour later were ordering our evening meal in the hut. We started early next day for the Cimone by the ordinary route, a very unusual variety of climb, including a crawl through a natural tunnel in the rock, and a fine, steep pitch, spoiled by a fixed rope. The summit ridge is exceedingly sharp and narrow, and the downward views are more impressive than those from the Grépon or Géant. In order to join our anxious parents for

a picnic tea above the Rolle Pass, we elected to go down the Travnolo Glacier.¹ A guide whom we met dragging his poor Herr with terrific force up the fixed-rope pitch told us it was madness and impossible, as it was never done now, and so on ; but once arrived on the col between the Cimone and Vezzana, we found the snow on the N. side in beautiful condition, and in spite of its steepness, and of the fact that we had only one axe, we soon got down to the Schrund, from which we enjoyed the second longest glissade I have seen, keeping to the left close under the rocks of the Cimone, a place quite free from crevasses and 'glissadable' right to the foot of the snow. We were soon enjoying a delightful tea, with the Cimone towering impressively overhead. This system of climbing to a picnic is a very jolly one for a family holiday, and is easy to manage in the Dolomites ; later on, in Switzerland, we felt quite lonely by contrast, when descending from a peak to a prosaic and not always too clean hut where we had our own meal to prepare. The following day we climbed the Sass Maor by Neruda's route (more or less)—the rock is all steep, but so universally climbable that I doubt whether two parties have ever gone up exactly by the same way. The Sass Maor is not a very exciting mountain, but its neighbour, the Cima della Madonna, we found much more interesting. From the gap between the two, one mounts a little ridge, traverses to the right, and then goes up a stiff little chimney, ultimately traversing back to the left to the foot of the Winkler Kamin. This looked a bit strenuous for the end of a day, so we invented another way to the top, traversing a long way to the right, round an amusing corner. Coming down from the gap, we had the usual difficulty in trying to read the German guide-book backwards, so to speak, and wasted an hour following the footsteps of a supposed cow ; but how on earth the cow ever got up there, I cannot conceive, as the only way off the mountain that we (or apparently anyone else) could find entails a severe pitch of 50 feet² at the bottom of the gully where the cow's track was seen. There must be some other way up that nobody has yet discovered ; but we could get no intelligent information from the only cow we saw. In spite of this delay, we arrived in the fields above San Martino in time for the usual

¹ [The line of the first ascent by Mr. E. R. Whitwell, with Ch. Lauener and S. Siorpaes, in 1870.]

² [This is easily negotiated by threading the rope through a hole in the roof of a cave under the pitch.]

picnic, unfortunately our last, as our parents left for England the following day.

The Vajolet Towers were our next objective, and we found the way up the Winklerturm without difficulty; one of the pitches (a chimney above a long horizontal traverse to the right) is very stiff, though only for a short distance. In boots it would be well-nigh impossible. It is, I believe, usual to abseil from the Winklerturm to the Stabeler, but we managed to climb down without actual dependence on the rope. This was no doubt in part due to the efficiency of our shoes, thin leather boots with soles of a single layer of crepe rubber. We found that after three weeks' climbing and much work on screes, etc., the soles hardly showed a sign of wear, and at all times they gripped the rock magnificently, even when wet, provided only no lichen is growing on the surface; in that case scarpetti are slightly better. To resume our climb: at the foot of the steep pitch on the W. side of the Winklerturm, one steps across a gap of four or five feet, though the two towers actually touch each other very many feet below; the Stabelerturm is now easily ascended, and the traverse to the Delagoturm is equally simple. After climbing half-way up the latter, however, I misread the guide-book as usual, and came to a deadlock; verticality plus loose rock is not to my taste, and we ignominiously retreated, finding a way down the Stabelerturm. We discovered later that the key to success is round a corner to the right of the place where we stuck. A guide would, no doubt, have known the way, but it is much more fun to climb two of the towers without a guide than to do all three of them with one.

That evening we walked on to Campitello, and put up at the comfortable Mulino hotel. In search of excitement at another hostelry, we dropped into a very 'rough house.' The harvest had just then been gathered and there was a dance going on; a girl was (as usual) the cause of the trouble, and two men began quarrelling about her; nearly all those present joined one side or the other, and bottles were soon in evidence as weapons; the anxious manager protected his glass doors from injury in a truly marvellous way, and somehow got the fighters through them into the street without the breaking of a pane; this done, they all presently returned and went on dancing (with black eyes) as if nothing had happened.

On the morrow we walked up to the Sellajochhaus, and made plans for the N.E. ridge of the Langkofel. We were joined by Smythe, and started from the Haus at four next

morning. The route³ goes up a slanting easy groove on the E. end of the N.E. face, along a traverse a kilometre long, but all of it very easy, being a walk over most of its length. At the end of this, one strikes upwards, still keeping to the right, until the great gully just E. of the true N.E. ridge is attained. Here we had breakfast under some overhanging rocks, which were just steep enough to send the falling stones beyond us ; it was a fine but windy day, and many little stones fell down as the sun got up, for which reason this climb should always be started at an early hour. From the gully we went up a deep chimney on its true left, that is, on our right, and reached a gap in the N.E. ridge. Thus far the climb was straightforward, but here the difficulty—both of climbing and of route-finding—began. We took a slanting traverse to the right, on to the N. side of the ridge ; then another back to the left, gaining height, but slightly. A series of easy chimneys led us to another short traverse to the left. Here we attempted to go straight up the face of the rock, but it was red, which in the Dolomites usually means loose ; it was moreover vertical, possibly overhanging, and I didn't relish the extreme likelihood of a fall, so explored the continuation of our traverse to the left and slightly downwards. Here we found the solution of the problem. There is another traverse upwards and to the left, on very steep rock with small holds ; but here the rock is sound, and, though difficult, the traverse is apparently safe, and leads into a long shallow chimney with good anchorage. We soon went up this, and, after sundry adventures with loose rock, attained the true crest of the ridge. It is a long way up this to the top, and one has to be very careful of the shattered rock on the ridge. Temptations to traverse to the right should, I think, be avoided ; the others were very anxious I should go to the right on several occasions, but I was fortunately convinced that our route lay up the steep and shattered ridge, which turned out to lead straight to the summit. We *did* enjoy the rest on top ; we had been climbing rock for nearly ten hours, often with great care and sometimes with considerable difficulties ; moreover, it was one of the finest days for a view that I have ever experienced, and we felt the half-hour, which was all we could afford on the top, was far too short. One saw everything there

³ [See marked Sketches in Purtscheller and Hess, *Hochtourist*, vol. iii. pp. 42 & 43. The whole group is the subject of an exhaustive, magnificently illustrated monograph by Guido Mayer, in the *Zeitschrift D. und Ö.A.V.*, vol. xlv. (1913).]

was to be seen : all the Dolomites and most of the Eastern Alps, with the fantastic pinnacles and towers of our own peak and its neighbours as a wonderful foreground. But we had very little idea of the way down the other side, so we had to set off to find it, all too soon. By this time my 'climbing German' was a little better, and we found after slight delays the key to the descent : along a ridge leading S.E., and across it down a small chimney on its N.E. face to a horizontal traverse 60 feet below the ridge ; this leads to an otherwise inaccessible gap between the ridge and a fine red tower. Over this gap we went to the S.W. side of the ridge, and down broken ground to another large red tower, several hundred feet below. At this point we couldn't tell where on earth we were, according to the guide-book, so resolved to find our own way down to the Langkofel Glacier. We went to the right of the tower, down a series of steep but not over-difficult grooves to a broad shelf. Here we traversed to a gap to our left and below us, which was, we found to our delight, the top of a long couloir running down to the glacier. The ordinary way or Felsenweg leaves this couloir on its true left, about half-way up ; but the snow was good on the whole, and our way down, if not the right one, seemed to work out all right. The glacier was easily attained, and below that the route, quite a complicated one, is well cairned. We were delayed in the descent by the fact that Smythe's Kletterschuhe, new that morning, were completely worn through by the time we reached the top ; several pairs of gloves, stockings, and so on, had to be called into action as a substitute for soles, and after our descent there was very little left of them ; so I hurried over the Langkofeljoch to the Sellahaus, and returned with boots, which arrived in time to give Smythe a good scree-run home. Here we did ample justice to the food, and felt, as I still feel, that it had been one of the finest mountain expeditions of our lives. The climbing and route-finding are interesting throughout, and the way up consists of over 3000 feet in vertical height of rock-work.

On the next day we did the Zahnkofel by way of a rest, and the day after saw my brother and me on the Cinque Torri, on our way to Venice. A few days later we re-started our climbing holiday at Grindelwald, where we were joined by Beetham, W. V. Brown, and A. J. Rusk. Here we did very little of interest, though we had magnificent weather. After the usual Wetterhorn for the first day, we attempted to traverse the Schreckhorn on the second, but thunderstorms compelled us to go instead for the Klein Schreckhorn, where

we acted as lightning conductors for a time before glissading down to the Schwarzegg path. After a day's rest, we tested the provisional oxygen apparatus for the next Everest Expedition by taking it over the Eiger, a mountain whose general slope and character are very like those of Mt. Everest. The way up from the Eiger Glacier station is, of course, quite easy, but on the S.W. ridge 'baby' gave us a lot of trouble, though the ridge gives perfectly good going for one who is not burdened with a 40-lb. child. On our way down this we saw the best Spectre of the Brocken any of us had ever witnessed, which showed that for our trouble with the apparatus we had been duly crowned with halos. This led, however, to a serious quarrel, for each claimed the halo for himself, and protested that it was not visible on the heads of the others. Of course, it never is; neither in the Brocken Spectre nor in real life.

The Bergli hut was crowded when we arrived there, and our correspondingly bad tempers made us all lose what chance of a real halo we otherwise might have had—all except Beetham and my brother, who, as usual, were indefatigable in their preparations for the evening meal. By way of a rest on the morrow, we climbed the Mönch (by the slackest way, of course), and arrived in Grindelwald in time for tea, ending this meal with a dead-heat of eleven pâtisseries apiece, and uncounted cups of tea. Beetham and I then proceeded to sell our mountaineering souls by climbing the Jungfrau, largely by means of the railway; we went down past the Bergli hut, and thence, after descending a few hundred feet, contoured to the Schwarzegg. On the following day, we did the Schreckhorn, back to the hut; near the summit I unfortunately sprained my ankle by jamming a foot, and could hardly walk the next morning; however, by starting half an hour ahead of Beetham and Rusk, I managed to get it going, and together we traversed the Finsteraarhorn to the Concordia hut. (I found on getting to England that the injury was a small fracture, and not a sprain, and this no doubt accounts for the fact that one was able to use the foot with but little disability. Sprains are beastly things, and usually disable far more seriously than these little fractures.)

On the next day we went up the Aletschhorn by its N.E. ridge, and down over the Lötschenlücke to Ried; a good long day following on three others almost as big, which landed us tired at the Hotel Nesthorn. We had done no climbing of

any difficulty, but had, at any rate, managed four of the highest peaks of the Oberland in four days. The Bietschhorn, which we climbed from Ried, disappointed us: it is such a fine peak to look upon; but we felt both the N. and W. ridges⁴ very poor climbs, especially since there were several other parties, all very slow, who kept getting in the way in just those places where a detour is impossible. By walk and train we reached Randa the next day in time to go up to the Weisshorn hut, which we hailed with joy as a welcome contrast to those of Ried and Grindelwald, for it was empty, and we had it all to ourselves. Our objective was the Schalligrat, and we started early, about 3.30, too early as it proved, for we had to wait for daylight when we reached the first spur of rock that comes down from the E. shoulder of the Weisshorn. This was crossed at the place used for the ordinary way up the mountain. The next and largest rib of rock delayed us nearly two hours; we struck it far too high, and indulged in quite a severe bit of climbing to surmount it. At one point I touched a large block, weighing perhaps 10 tons, which began to move; it was just lying at the angle of friction, and stopped when I pressed my hand against it. I told the others to get into safe places while I held it, and then left go and hurried back across a sloping slab, which in itself was not too easy. The block remained still for two or three minutes, until, just as we were about to proceed to traverse below it, it slid off, missing us all, but hurtling down five hundred feet to shatter itself at the bottom of the cliff. A few seconds later, and we should very likely have been carried away or crushed by its fall. Once this tongue of rock was surmounted, our way lay almost horizontally along glacier and easy rocks to the Schallijoch, which we reached at 9.30 A.M. The ridge was at its best, and scarcely any snow was encountered; it is a pure rock-climb, for the most part sound, and in two or three places quite difficult, but on the whole straightforward. We took all the gendarmes direct until fairly near the top, when one has to keep on the S.E. side of the ridge; and here there is quite a steep bit of climbing with holds that make it surpassingly safe. Thunder had been brewing for the last hour or two, and threatened very imminently when we reached the summit, so, forgoing the usual halt, we hurried down the E. ridge, and the storm burst on us while we were on the

⁴ [The E. ridge or S. face will be found more interesting. The S. ridge from the Thiereggghorn has not been ascended.]

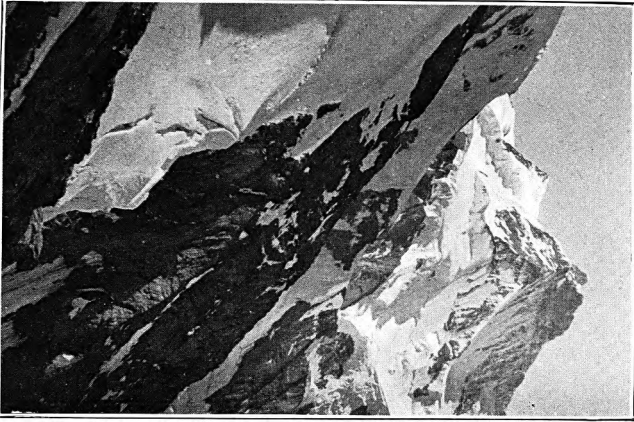


Photo B. Beetham.

JUNGFRAU.
From Eiger.

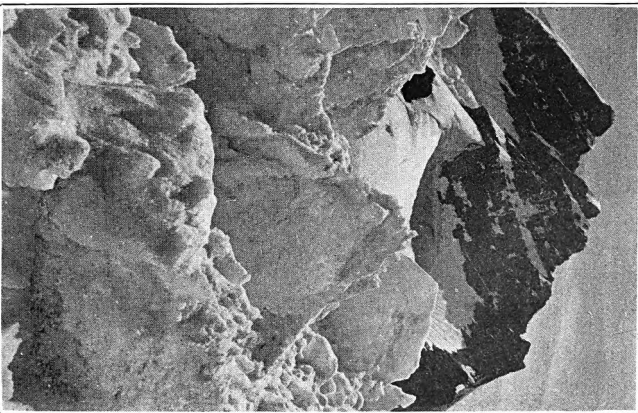


Photo B. Beetham.

JUNGFRAU.
From below Ober-Mönchjoch.

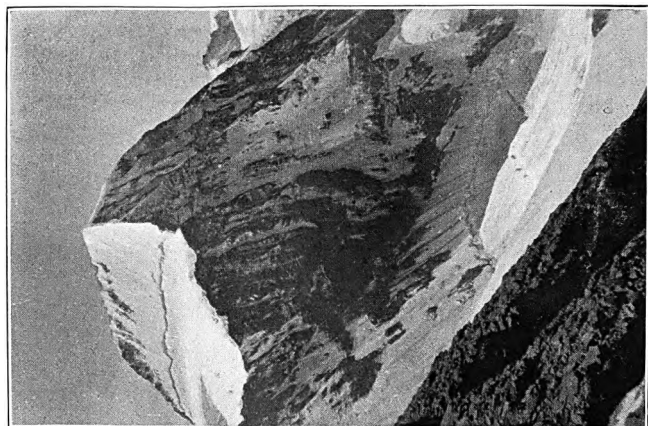


Photo B. Beetham.

MÖNCH.

From Eiger.

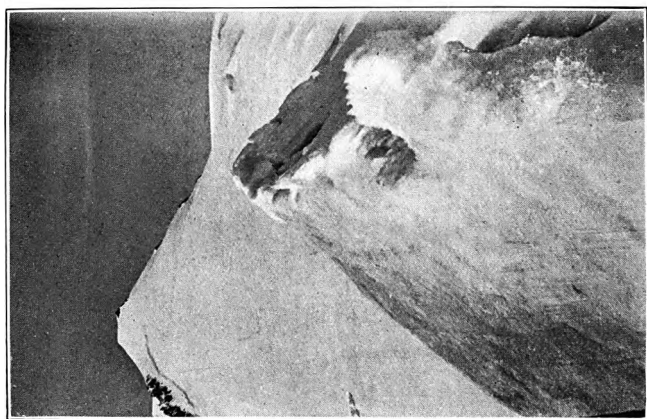


Photo B. Beetham.

ALETSCHHORN.

From ice ridge on way up from Aletschfirn.

sharpest bit of snow-crest. Beetham and Rusk declared they felt the flashes, but, personally, I was so much engaged in deciding whether to run along the ridge or to climb it properly that I cannot claim to have felt the lightning. We soon got shelter just below the crest, and witnessed for half an hour one of the finest storms, and certainly the most menacing, that I have ever seen. In a short time it appeared to be fairly safe to continue the descent of the ridge, and in due course we got back to the hut at about six, to find it so full that we decided to go down to Randa.

After a day of leisure in Zermatt, Beetham and I went up to the Trift to essay the traverse of all the central Pennines from end to end in one expedition, sleeping in bags on the way; but the wind was very high, and the fresh snow very awkward and annoying, blowing about the ridges in a most inconvenient manner; so after ascending the Gabelhorn and traversing to the Wellenkuppe, we decided the rest of the ridge must be left to a future date. It could not be done, we had calculated, unless we could do every bit of it in two-thirds the 'book' time, or less, and as far as the Wellenkuppe we had, owing to the bad conditions, taken exactly text-book time. And so, with disappointment at the failure of this long-projected expedition, we returned to Zermatt, and so home. We had done nothing out of the ordinary, though we had had a fairly energetic holiday, spent almost from first to last in gorgeous weather.

[Mr. Somervell, although much occupied, was good enough to write this paper on board ship between Liverpool and Marseilles. This accounts for a somewhat tantalising absence of detail, which one would have been glad to have from so capable a mountaineer. His record for the season was 85 peaks for 85 days.

His estimates of 'difficulty' in the Dolomites are interesting, but would not, I think, be generally accepted. The Zsigmondykamin is very short, with one awkward place, whereas the Schmittkamin is a much longer affair, with several delicate bits.

Mr. Somervell has now taken up the appointment of Medical Missionary at the London Mission Hospital, Neyyoor, Travancore, South India, but, it is satisfactory to know, he will be available for the next Everest Expedition.—J. P. F.]

THE EVOLUTION OF A MODERN *GRANDE COURSE*.*The N. Face of the Dent d'Hérens.*

BY GEORGE FINCH.

[This ascent is not likely to find much favour. It is a traverse right across the N. face from one bounding arête to the other, a class of route not to be recommended. The somewhat detailed paper is printed mainly as a very instructive object-lesson—not least to the aspirant to Everest honours—of the meticulous preparatory observation and study which a master in mountaineering, of equal experience in rock and ice, considers necessary to give to the safe solution of an alpine problem of difficulty involving, otherwise, considerable danger. So long as a problem is approached with equal care, capacity, and knowledge, it is as legitimate a mountaineering undertaking as other great expeditions—but not otherwise.

The main title of this paper is inserted by myself.

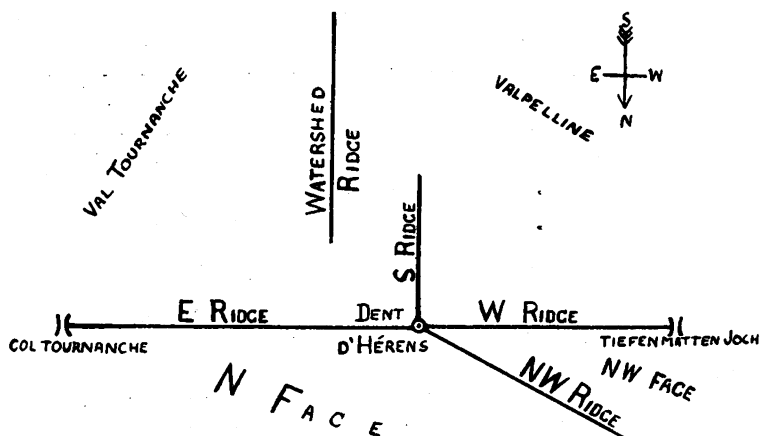
J. P. FARRAR.]

ONE of the younger generation of mountain climbers once complained bitterly to me that there were no new climbs to be done in the Alps, the pioneers having, in his opinion, with extraordinary thoroughness and selfish disregard for their posterity, climbed every virgin pinnacle and explored all climbable ridges and faces. To his surprise I replied that our thanks were due to the pioneers, for, though some had no doubt digested much of the grain, the fattest and best grains remained for the man of to-day who knew where to look. The good grain that is left can no longer be picked up without trouble. We all know what faces and ridges of mountains have not been explored, but the successful climbing of these must be preceded by careful and patient investigation.

In August 1911 I enjoyed a happy day of perfect laziness on the Stockje. My main purpose was to examine the Zmutt ridge, with the intention of climbing it on the following day. But ever and again my gaze was irresistibly drawn, as if for relief, from the solemn, dark magnificence of the Matterhorn to the white purity and graceful curves of the hanging glaciers of the N. face of the Dent d'Hérens; and I found myself seeking in vain to trace the way by which it had been climbed. That winter, on searching Alpine literature, I discovered, with no little astonishment, that the whole vast N. face of the mountain, from the Col Tournanche right round to the N.W. ridge, was every inch of it virgin ground. Here truly was a

grain fat enough to satisfy the greediest appetite, and I made up my mind to secure it.

It was not until 1913 that I had an opportunity of returning to the Schönbühl hut. From there I set out on a prospecting trip and, traversing the Wandfluh from the foot of the Dent Blanche down to the Col d'Hérens, not only succeeded in spying out a feasible way of conquering the N. face of the Dent d'Hérens, but also gained some insight into the geography of the mountain itself. The peak is a curiously complicated one, and the errors into which even surveyors, especially on the Italian side, have fallen are well known. The summit is supported by four ridges—the S. ridge which leads down



to the lower Za-de-Zan glacier, the W. ridge to the Tiefenmattenjoch, the N.W. ridge to the Tiefenmatten glacier, and the E. ridge to the Col Tournanche. The W. and N.W. ridges meet at a point less than 100 ft. W. of the summit. The N.W. ridge, when seen from the Schönbühl hut, is usually confused with the W. ridge, from which it is actually separated by the steep, glaciated slopes of the N.W. face. The fact that the ice cliffs of this face seem to be perched on the N.W. ridge has probably given rise to the impression that this ridge can no longer be climbed owing to the formation thereon of a hanging glacier.¹ In reality the ridge is entirely free from such encumbrances. Between the N.W. and E. ridges lies

¹ Dübi, *Guide des Alpes Valaisannes*, II. p. 238; and Illustration, A.J. xxvi. opp. p. 410.

the N. face. The watershed ridge between the Val Tournanche and the Valpelline does not reach up to the Dent d'Hérens; shortly above the Col des Grandes Murailles it loses itself in the southern slopes of the E. ridge.

From my point of vantage on the Wandfluh, I saw that the N. face of the Dent d'Hérens carries a huge glacier terrace, or corridor, which, beginning low down near the foot of the N.W. ridge, rises diagonally upwards across the face and reaches the E. ridge just below the great final gendarme E. of the summit. It was perfectly clear that, could this terrace be gained at its lower end and left at its upper, the problem of climbing the face would be solved. Despite my conviction that the climb was feasible, however, the objective dangers—that is, unavoidable dangers from falling ice and stones—appeared so great that for the time being I gave up all idea of making the attempt.

During the war a handful of mountain photographs beguiled many a weary hour, and among them was one of the Dent d'Hérens as seen from the Wandfluh. I studied this picture intently, and finally promised myself another look at the mountain as soon as possible after the war. In 1919, therefore, the Schönbühl hut became once more my base of operations. I again traversed the Wandfluh, and later, by climbing the Tiefenmattenjoch from the N., was able to inspect more closely the possible approaches to the lower end of the great ice corridor. Eventually, in order to obtain a more comprehensive view of the upper reaches of the corridor, I climbed the Matterhorn. At last, believing that nothing else would furnish the required information, accompanied by Mr. Hafers, I made the ascent of the N.W. ridge. This climb showed me that the dangers of the N. face were by no means to be underrated. The whole terrace gathered up much of the rock that crumbled away from the uppermost slopes of the mountain, and the approaches to its lower end were not only swept by stones from sunrise to sunset, but were also defended by frequent falls of ice. Indeed, real safety there appeared to be none until the E. ridge had been gained at the foot of the great gendarme before mentioned. I retired discomfited. But the magnet was strong, and in 1921, having meanwhile somewhat modified my views as to what precisely constitutes objective dangers, I returned to the Schönbühl hut, whence a series of visits to the Pointe de Zinal, the Stockje, and the Tête de Valpelline at length convinced me that what, in ordinary circumstances, would be a dangerous climb could, if tackled properly, be converted into a safe and justifiable undertaking.

The lateness of the season, however, prohibited my putting any theories into practice, but plans were maturing favourably. By gaining the lowest rocks of the N.W. ridge and climbing up either these or the rocks and ice of its N. flank to the level of the terrace, a short traverse over steep ice would give access to the terrace itself. On account of the frequent stonefalls which ricochet across the barely emerging rocks of the N.W. ridge when the sun is shining on the highest slopes of the mountain, this part of the climb would have to be completed during a cold night before sunrise. As the ground was obviously difficult, a moon would be of advantage. Two-thirds of the way along the terrace a large bergschrund threatened trouble, but, this overcome, there seemed to be nothing to prevent one's gaining the E. ridge at the foot of the great gendarme. The whole of the route along the terrace itself appeared to be swept by falling stones and, in its lower end, by falling ice; but, owing to the comparatively gentle angle of the terrace, I believed that stones would be held up in the snow. In 1921 I also crossed the Col Tournanche, and from there received confirmation of the fact that no insurmountable obstacle barred the exit from the upper end of the terrace to the E. ridge.

Unfortunately, in 1922, being busy elsewhere, I was unable to return to the fray, but this year the long-wished-for opportunity arrived. Towards the end of July I set out on a final series of investigations, determined that they should lead to the conquest of this great N. face. My friend Raymond Peto and I climbed the Dent Blanche, returning by the 1862 original route of Kennedy, leaving the gendarmes above us, while we traversed back along the snow and ice-plastered slabs of the S.W. face. The ascent was made with a twofold object: firstly, to get one more thorough insight into the great terrace of the Dent d'Hérens, and secondly to give Peto, whose maiden climb this was, a chance of finding his mountain legs, it being my intention that he should be one of my companions on the new venture. And here I may be permitted a slight digression. I have more than once been criticised for taking inexperienced people on difficult, and what my critics, too readily, refer to as hazardous, climbs. In reply I would point out that a difficult enterprise is not necessarily a rash one, though it may well be made so if one embarks upon it without thorough investigation and detailed planning. If, by the simple inclusion of a beginner in the party, the difficult be transformed into the hazardous, the reflection is on the capabilities of the leader.

Also, fifteen years of guideless climbing have taught me, *inter alia*, that in the mountains one must not take one's responsibilities lightly. Furthermore, the inexperience of the beginner who is physically sound and no coward is a much less dangerous drawback to the leader of a party than the argumentative embryo-mountaineer who, after three or even fewer brief summer seasons spent in climbing, often only in a secondary capacity, imagines that the mountains hold no more secrets for him. To the experienced climber who feels that there is still something new for him to learn, I would commend the tyro as a companion—for his puzzled, but often fundamental, questionings may suggest a new train of thought or throw fresh light upon what seemed but the obvious and commonplace.

To return to our problem. From the Dent Blanche I could see that both the bergschrund at the foot of the N.W. ridge and the one intersecting the snows of the great terrace were of formidable proportions and likely to give a great deal of trouble. Next day, by going up the Tête Blanche, I was able to get a better idea of the ground from the foot of the N.W. ridge up to the terrace.

On the strength of the knowledge now possessed, I drew up a provisional time-table. At midnight we would leave the Schönbühl hut. Going round the Stockje and passing through the two icefalls of the Tiefenmatten glacier, we would reach the bergschrund at the foot of the N.W. ridge not later than 3 A.M. The bergschrund and the difficult ground above, consisting of ice interspersed with rock, would have to be tackled in the moonlight, and this would give us time to gain the lower end of the terrace about six o'clock, before the sun's rays had become powerful enough to start stones falling. All would then be plain sailing until about two-thirds of the way across the terrace, where the formidable bergschrund would have to be negotiated. Should this obstacle prove impassable, we could return in all haste to near the end of the terrace where, in the shelter of a great ice-cliff, it would be possible to bivouac. In the earliest hours of the following day the retreat would be completed *via* the N.W. ridge and the summit. Should the bergschrund go, however, there would be nothing to prevent our gaining the E. ridge.

These studies of the N. face of the Dent d'Hérens had entailed in all eight visits to the Schönbühl hut of a total duration of nearly six weeks. Was it time thrown away, or is not mountaineering worth the endeavour to make it a

justified source of intellectual and physical training invaluable in every phase of one's daily life?

On returning to Zermatt we were joined by Guy Forster, an old and tried companion on many difficult ascents, more than one novel. The functions of the various members of the party were easily arranged. Forster and I were to act as guides and Peto as porter. On July 29 Peto, bent on sketching, set off once more for the Schönbühl hut, and on the 30th Forster and I followed with the necessary provisions, climbing-irons, 100-ft. A.C. rope, and 200 ft. of cotton sash-line. The latter might prove useful in the event of a forced retreat back to the N.W. ridge and perhaps also on the terrace. At a few minutes past midnight we left the hut, telling the caretaker of our intentions. We crossed the glacier to the Stockje in the light of a strong moon. Just beyond the ruins of the old Stockje hut we put on climbing-irons and roped. The first ice-fall of the Tiefenmatten glacier was easily overcome near the left bank. But the second, which experience had told me was most vulnerable on the extreme right bank, gave more trouble. Here, close under the Dent d'Hérens, we were in the shadow of the moon, and had to make use of our lantern. For perhaps a quarter of an hour, while making our way as fast as possible up through a series of steep ice gullies and crevasses, we were in danger from the séracs perched on the great cliffs above. Once in the upper basin of the glacier, we ascended the slopes, bearing to our left round towards the foot of the N.W. ridge, and eventually arrived on the lower lip of the bergschrund which defends the foot of the ridge. The spot was strange, forbidding. In the gloom, a hundred feet above us, towered the upper lip—inaccessible. In dark, shining patches the rocks of the N.W. ridge showed through, pitilessly smooth, and glazed with a thin covering of treacherous ice. To cross here was impossible, but, by working out into the N.W. face and following the bergschrund to where it curves upwards almost parallel with the N.W. ridge, we found a likely place. The first attempt to get over the bergschrund met with failure. The bridge selected afforded, it is true, a means of access to the slopes above, but I quickly discovered that it was too delicate a structure, and preferred to go back to where we could descend a few feet on to some snowed-up blocks in the steeply rising schrund whence we could cut up the vertical other side. I gained the upper lip, but the work involved was far from easy, and before its completion I had to retire for a rest while Forster

improved my sketchy foot- and hand-holds. It was then that I took stock of the time: it was four o'clock; we were an hour too late, and there was nothing for it but to go back. On Forster's return I recommenced work on the ice-steps, converting them into great holes which would be certain to hold out until the following day. This done, I informed the others of my decision and, without a murmur of dissent on their part, we turned back. Instead of going straight down on to the glacier, however, we worked down along the lower lip of the bergschrund to some distance beyond the foot of the N.W. ridge, in an endeavour to find another way across which would give more direct access either to the N.W. ridge or to the slopes leading up to the lower end of the terrace. The search was vain, and, just as the first red rays of the morning sun touched the summit of the Dent d'Hérens, we fled towards the Tiefenmatten glacier from the stones that were soon falling. No time was lost in hurrying through the upper ice-fall—for here safety lay in speed. That morning, in time for a belated eight o'clock breakfast, three dejected climbers arrived back at the Schönbühl hut to a welcoming chorus of 'We told you so.' The one crumb of comfort was the word 'Unmöglich,' freely applied by all and sundry to the N. face of the Dent d'Hérens!

In the afternoon the weather changed for the worse. At 11.30 p.m. we looked out to find rain falling heavily; towards morning it actually snowed in the vicinity of the hut. It was not until after midday on August 1 that a strong N.W. wind set in and swept away the clouds—all but the gossamer-like streamers which clung tenaciously to the Dent d'Hérens and the Matterhorn, and the thick banks of mist that sought and found refuge from the gale in the grim recesses of the Tiefenmatten basin. Heavy, new snow had fallen on our mountain, and great wisps of it were being torn up over the ridges and the slopes of the N. face and borne away on the wind. But the weather was good; and the new snow, though it would undoubtedly impede us in some places, would hold loose stones firmly in their beds for longer after sunrise and thus actually render our climb more safe. That night was the coldest I have known in the course of this wonderful summer of 1923.

At a quarter to midnight, on August 1-2, we left the Schönbühl hut. The moon was hidden behind the Matterhorn, which was silhouetted against its light with almost startling clearness, and it was not until we had gained the moraine of the Stockje

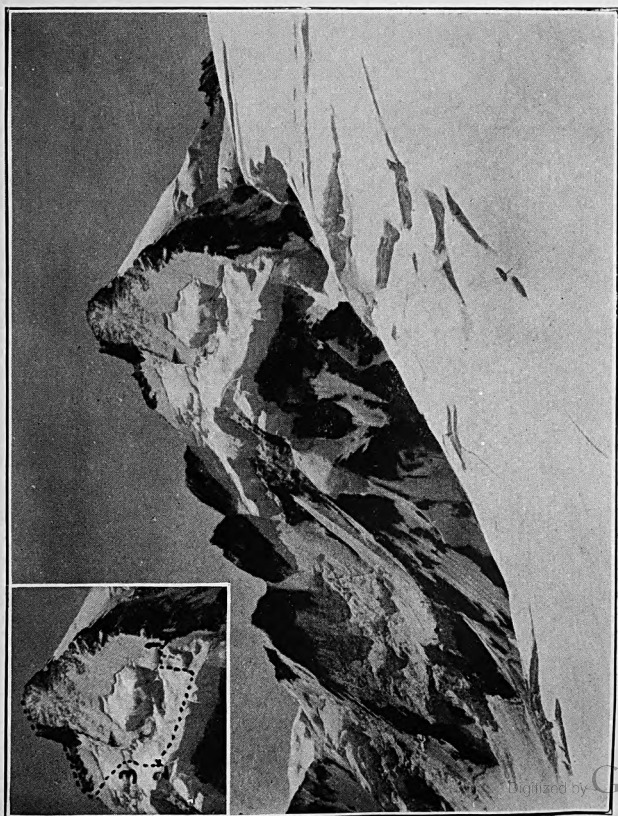


Photo G. I. Finch.

N. FACE OF DENT D'HÉRENS

From near Col d'Hérens.

1. "Immense gully," p 219.
2. Breakfast place, p 220.
3. Bergschrund, p. 226.



Photo G. I. Finch.

DENT D'HÉRENS

From Stockje.

that we were able to dispense with the lantern. Walking rapidly, and finding our way through the ice-falls without hesitation, we arrived in the upper basin of the Tiefenmatten glacier at a point below the N.W. ridge just where the slopes steepen up towards the bergschrund. Here, sheltered from the cold wind behind a huge block of fallen ice, we halted (2.30 to 3 A.M., August 2) to adjust climbing-irons, breakfast, and rearrange knapsacks. I had the pleasure of handing mine over to Peto. We re-lighted the lantern and climbed up to the bergschrund, to find the steps cut two days before quite usable. Once over the bergschrund a steep ice-slope lay between us and the nearest rocks of the N.W. ridge, now about 200 yards away. Alpine literature contains many examples of that looseness of description which permits the raconteur to describe, as ice, a slope covered with inches of good firm snow. But here in front of us was the real thing. On warm days water from the ice-cliffs perched on the rocks above flows down over this slope, not in well-defined channels, but fanwise, so as to leave bare ice. What the angle of the slope is I cannot say, as I had no clinometer, but where we cut across, always keeping about 100 to 150 ft. above the upper lip of the bergschrund, it was very steep. Higher up, the inclination was somewhat more gentle; but for two reasons we chose to cross the slope at its steepest—in the first place, fewer steps would bring us to the ridge, and in the second, should stray stones or odd blocks of ice fall in spite of the early hour and the intense cold, there would be much more chance of such missiles going over us than if we were standing on the less steep slopes higher up. The order of the party was as follows. I led, untrammelled by a knapsack, Forster came in the middle, and Peto brought up the rear. How Peto would manage was rather uncertain, as this was his first serious essay with climbing-irons. Forster was to look after both my rope and Peto's, and would, in the event of a slip on the part of the latter, have to hold him—a task of which I knew he was fully capable if only the steps were well cut and reasonably large. Just as we began to cut our way across the slope a fierce gust of wind blew out the candle; and henceforth, though it was still rather dark, as the light of the moon did not reach the secluded spot directly, we decided to dispense with artificial light. I cut the steps as quickly as possible without wastage of blows, but very carefully. Always the same method—left-handed cutting, for we were traversing from right to left; six or seven medium blows

marking out the base, twice as many heavy blows to break down the roof of each step, half a dozen dragging hits to make floor and wall meet well inside, a scrape or two with the adze to make sure that the floor was clean and slanting into the slope, and another of the many steps was ready. But while I was steadily cutting out my first rope's length from Forster, he and Peto were getting the worst of it in a heated difference of opinion with the lantern. Now a lantern which is not burning should be folded up and put away. But this particular sample proved stubborn. Peto's struggles to make it behave being unavailing, he very considerably passed it on to Forster, by which time I was already straining at the rope to cut a next step. Having only two hands, both of which were wanted on more important business, Forster thrust the lantern between his teeth, came up a few steps, and so gave me sufficient rope to proceed. After a further desperate but vain effort to fold the lantern up—with the candle still in it!—and handicapped by his limited number of hands, he at last solved the difficulty by biting the candle in two, and eventually succeeded in stowing away the very refractory and useless article in his pocket. From then onwards we really got into our stride. I worked away in a perfectly straight, almost horizontal, line towards the rocks of the N.W. ridge; my comrades moved one at a time, Peto evidently enjoying the slope in spite of its appearance—particularly formidable with darkness surrounding us and the ever-increasing drop beneath.

It was very cold, and from time to time the fierce gusts of a fresh wind made us pause in our labours and crouch well down on to the slope to retain our balance. At a quarter past four the last step had been cut and the rocks of the N.W. ridge gained at a point a little above the bergschrund. We immediately crossed over to the N. face, where the rocks were more broken. They were well plastered up with ice and snow, but nevertheless we all tucked our axes into the rope at our waists and, with both hands free, moved upwards at a good pace. Our mode of advance consisted in my going out the full 60-ft. length of rope between myself and Forster and finding good standing-ground or reliable belay; whereupon the other two, moving together with a taut rope between them, would climb up to me. There was much verglas on the rocks, and everything was buried in fresh snow; but I steadfastly refrained from using the axe, utilising hands and fists to clear doubtful places and relying as much as possible on the climbing-irons. To use the axe on this kind of ground

before it is absolutely necessary invariably results in the loss of valuable time. We kept to the N. side of the ridge, only twice touching the crest, and, after one and a half hour's climbing at full pressure, arrived at a point high up above the lower end of the great terrace where a feasible way of gaining it at last appeared. Between the terrace and the rocks of the northern flank of the N.W. ridge lies an immense gully, at the narrowest point of which we now stood. It was extremely steep, as the ice had run and formed a sort of bulge. Forster and Peto having stowed themselves firmly away on the last little island of rock, I started to cut across it. After some heavy step-cutting in extraordinarily steep ice, I arrived in the middle of the gully, only to see about 100 ft. lower down a better means of gaining the terrace. So I returned and, joining the others, descended these hundred feet and once more set out to cross the gully. It was not very wide, being only some 80 ft. from the last of the rocks to the terrace itself, but the work was certainly hard. After about twenty minutes' step-cutting, I found myself standing in the bergschrund formed by the terrace and the ice-slopes above, and there Forster and Peto soon joined me. By following the lower lip of the bergschrund for a short distance and leaving it at a point where it curved abruptly upwards, it would have been possible to make a horizontal traverse of about 300 ft. across a steep snow-slope to where the terrace was more gently inclined. Unfortunately, owing to the state of the snow, such tactics could not be indulged in. The slope was heavily covered with an accumulation of new snow, much of which had fallen down from the steeper slopes above. The old snow underneath had a smooth surface and was hard frozen, and the fresh snow was of that powdery, non-cohesive quality which already possessed the thin, dangerous, wind-formed crust so respected by the winter mountaineer. To traverse such a slope would be simply asking for trouble: there was almost certain danger of our treading loose a snow shield and being swept down by it across the terrace and over the cliffs below. The only alternative lay in descending for a distance of about 200 ft. and then crossing the slope at its very foot, where it was no longer steep, hard up against the lower edge of the corridor where it breaks away in the vast ice-cliffs overhanging the Tiefenmatten glacier. It was here that our spare rope proved most valuable. We cut out a large block of snow in the lower lip of the bergschrund and laid our doubled spare rope over the improvised belay. With Peto going first, we then went

straight down the dangerous slope towards another suitable belay lying about 100 ft. below and consisting of a large stone which had fallen from the Dent d'Hérens and was now firmly embedded in the old snow. By means of this second belay we descended another hundred feet, and then arrived at the very foot of the slope, where its angle eased off so rapidly that in spite of the great masses of powdery snow, it was at last possible to cross, in safety and without fear of loosening a snow shield, over to the great terrace.

The angle of the ground where we now found ourselves was gentle—sometimes no more than 20° ; but, under the threat of ice falling from the hanging glacier above, Forster and I urged Peto, who still led, to move forward with all haste until clear of the danger zone. At one place our way passed through an extensive field of ice-blocks—*débris* from the cliffs above. That practically the whole of this particular fall of ice had been arrested on the terrace will indicate how easy is the gradient at this point. 7.30 A.M. saw us more than halfway along the terrace at a point where it appears almost level. We were more or less directly below the summit. Close to the edge of the ice-cliff in which the terrace breaks away, we were at last in perfect safety. Nothing falling from above could reach us now; for the gentle slopes of the terrace between us and the final wall of the mountain provided an efficient trap for all stones tumbling down from the summit rocks.

It was with a sense of complete security that we sat down to another breakfast and to enjoy a well-earned rest; for, since crossing the bergschrund four and a half hours ago, we had been working at high pressure. The spot must be one of the wildest and most solitary in the Alps: behind us a rampart of precipitous cliffs, before us at our feet a few yards of gently sloping snow, then nothing until the eye rested on the Stockje, a mile and a half distant and nearly 3000 ft. below. Several parties were toiling up the Tête Blanche, but halted upon hearing our exuberant yells of delight as we settled down to our meal. It was cold; the wind was still strong and blowing snow-dust about, and, though all wore extra clothing and windproof overalls, we were by no means overburdened with warmth.

Shortly after eight o'clock we again set off. The slopes of the terrace now steepened up rapidly, and soon we were once more cutting steps—this time in good hard snow—up to the bergschrund separating us from the upper end of the terrace.

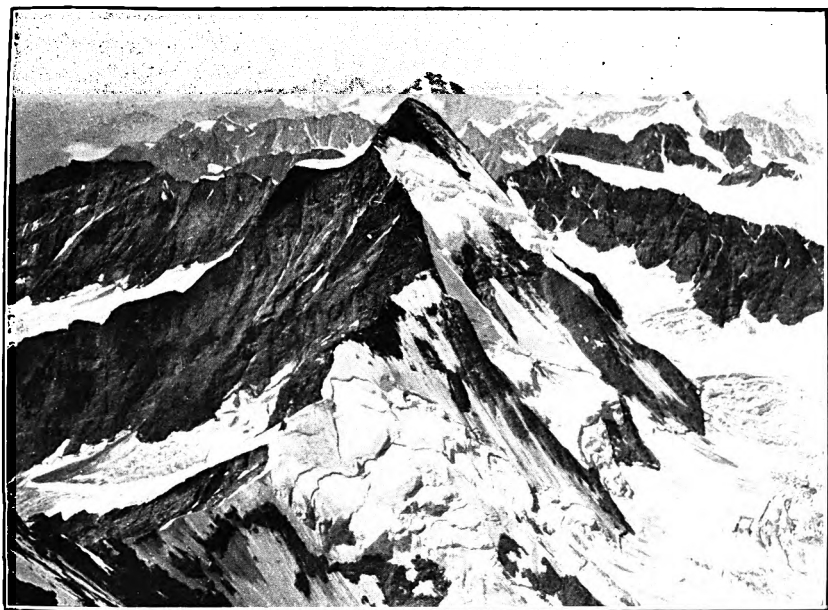


Photo G. I. Finch.

DENT D'HÉRENS.
From Matterhorn.

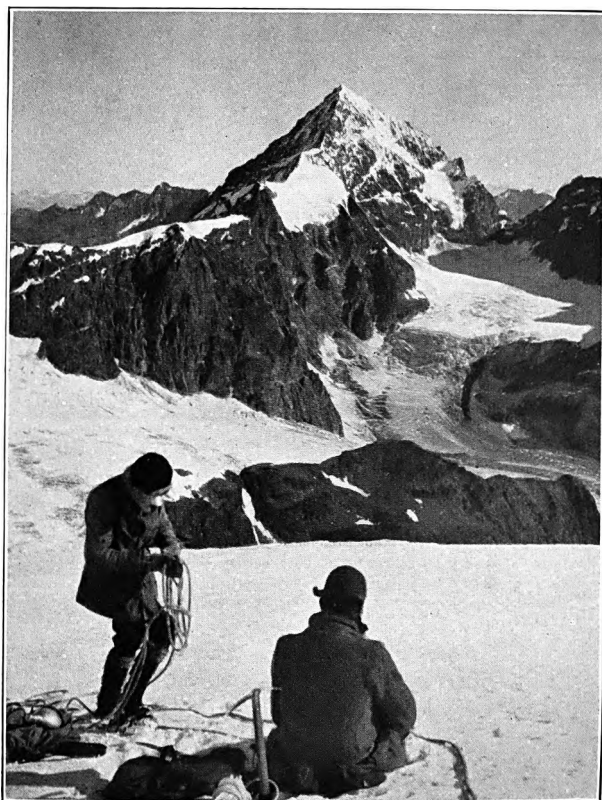


Photo G. I. Finch.

DENT BLANCHE.
From "Terrace" of Dent d'Hérens.

Just before gaining the lower lip we heard the rattle of falling stones, and a generous avalanche from the gully between the great gendarme on the E. arête and the summit crashed down straight towards us. During one of my reconnaissance trips I had watched through the telescope stones falling down this gully, and had observed that they were all caught by the lower lip of the schrund. Indeed, it was precisely this fact that had led me to the conclusion that the lower lip must protrude very much beyond the upper, which would therefore form a serious barrier in our path. On this occasion again every stone of the avalanche was swallowed up by the bergschrund, without the slightest danger to us. As soon as all was quiet we resumed work and, on gaining the lower lip, moved down along it to the left, where it approached more under the upper lip. The obstacle we now faced was assuredly a difficult one. It appeared to me that the upper lip could be attacked, with fair prospects of success, at its lowest part by cutting steps up about twelve feet of very steep ice and then drilling one's way through a cornice formed of hard frozen snow, some three feet thick, extending from the edge of the upper lip. An alternative way lay in making a difficult traverse still further to the left across the ice-face leading to a fault or notch in the cornice, affording access to the slopes above. At first I chose the former way. Forster anchored himself well and, holding both my rope and Peto's, let us across the débris-choked floor of the bergschrund to the foot of the steep pitch. I was soon cutting my way up this, while Peto held me steady, so as to avoid the necessity of making hand-holds. Now out of arm's reach, but jammed against the ice by his axe, I began to drill through the cornice. I succeeded in driving my axe through into daylight, but only after a great effort, and was forced to return for a rest. Forster then followed up in my steps, but, not liking the idea of laboriously enlarging the hole in the cornice, returned to investigate the possibilities of the alternative traverse to the left. For some distance Peto was able to support him with his axe, but for the last ten or twelve feet Forster had to cut with his left hand, relying on his right to help him retain his balance. By a brilliant piece of ice-work he wormed his way through the fault in the cornice out on to the slopes above. As soon as he had obtained good standing-ground and driven his axe to the head into the snow, I followed quickly, and together we gave Peto the necessary aid to enable him to join us.

Once more I took the lead. We were now aiming straight

for the eastern extremity of the level section of ridge lying immediately to the E. of the great gendarme. Everywhere the ground was so steep that steps had to be cut, but four or five blows with the axe were always sufficient, as the snow was hard and of good quality. To gain the foot of the gendarme over the slopes directly above us was out of the question on account of the impassability of an intervening bergschrund. Further to the E., however, this schrund was well bridged, and we crossed without difficulty. Here the snow changed. It was still good, but no longer so hard. Roped on to our 200-ft. length of sash-line, Forster now took the lead and kicked his way right up on to the ridge, while Peto and I enjoyed a welcome, if brief, respite from our activities. At eleven o'clock we were all sitting together on a great flat slab on the E. ridge overlooking the Val Tournanche, protected from the wind and revelling in the warm sunshine. We had won. From here to the top was merely a question of time and patience. The great N. face of the Dent d'Hérens, which had so long been spoken of as 'unmöglich,' had this day at last suffered defeat, and many were the shouts of triumph hurled down at its hitherto hidden recesses. In the simple amusements so dear to the mountaineer, a whole hour was spent at this delightful spot. We ate, we sunned ourselves, and drank in the beauties of the marvellous view. I will not expatiate thereon, but will content myself with paying tribute to the Matterhorn, which, seen as we saw it that morning, must surely be the most strikingly wonderful mountain in the world.

At noon, having discarded our climbing-irons, we again roped, Forster leading, I coming as second man, and Peto, as before, bringing up the rear. Making our way up a steep snow-ridge, followed by a vertical chimney—which, thanks to liberal handholds, was not difficult, though somewhat strenuous—we had soon covered the distance of about 80 ft. that had separated us from the E. end of the horizontal stretch of ridge and now overlooked the uppermost snows of the Za-de-Zan glacier, from which we were divided by less than 200 ft. of easy scree-slopes. Early in the day we had noticed the formation of fish clouds, and from up here saw that Mont Blanc was 'smoking a pipe.' The weather was obviously breaking; but, provided no time was wasted, we counted on its holding out long enough to enable us to finish the ascent. The horizontal stretch of ridge, despite the fresh snow that was lying about, gave no serious trouble, and soon we were at the foot of the great gendarme. It was plain that the latter, even

in the best of circumstances, would prove a stubborn customer if tackled directly over the ridge. For the sake of economising time, therefore, we moved out on to the S. side, and for more than two hours were kept fully occupied on slabby rocks where the handholds tended to slope downwards. Had the ground been dry, the climbing would probably have been fairly easy ; but to-day verglas and new snow were everywhere. Forster, free from the burden of his knapsack, which now graced my shoulders, was in his element. Our pace was not rapid, because the conditions rendered it advisable to move only one at a time, and the rock, apart from being glazed, was so unreliable that great care was necessary. At last, shortly before drawing level with the summit of the gendarme, a scramble up some particularly nasty slabs brought us on to a buttress of blocks where we were able to climb together. Forster dashed away in great style. We regained the ridge at the lowest point in the slight depression that lies between the summit of the great gendarme and that of the mountain itself. From there the climb along the final ridge was pure joy. Nowhere did we meet with the least difficulty. The rock was extremely good and wind-swept free from snow. The ridge was very narrow—in places even sensational. Sometimes it hung over to one side, sometimes to the other, and once it actually assumed a mushroom-like appearance and overhung on both. Our pace was furious, and Forster's exclamations of delight at the splendid climbing quite invigorating.

At 3.15 p.m., fifteen and a half hours after leaving the Schönbühl hut, we passed over the little snow-crest which forms the summit of the Dent d'Hérens. We did not halt : the weather was too menacing, and it behoved us to get off the mountain as quickly as possible. Just beyond the summit we again altered the order of the rope—Forster retained the lead, Peto came next, and I brought up the rear. After a short, easy climb down the steep but firm rocks of the little summit cliff overlooking the N.W. face, we struck a well-trodden track in the scree-slopes, and passing down these and two ice-slopes—the first a short one, the second long enough to induce us to put on climbing-irons—we reached a point on the W. ridge whence a convenient descent could be made over broken rocks towards the Za-de-Zan glacier. With the exception of one chimney, which might well have been avoided, all was easy going until, at the foot of the rocks, we had to descend a little ice-slope and cross the bergschrund below it. The deep snow covering the ice-slope was in a parlous condition,

and Forster had to cut well into the ice beneath in order to obtain secure footing. As luck would have it, we chanced to strike the best place to cross the bergschrund; for the misty haze now obscuring the sun also hid detail to such an extent that, until we were actually on the bergschrund, it was at times hard even to detect its presence. The usual sort of little zigzag manœuvre by means of which the weak points in the bergschrund's defences were connected up, saw us safely over on to the soft snow-slopes below. We had no difficulty in getting through the first small ice-fall of the Za-de-Zan glacier, though at one place we had to descend into a crevasse and make our way up the other side in order to effect a crossing. Passing close under the Tiefenmattenjoch, a long tramp in soft, wet snow brought us to the edge of the lower ice-fall. Having been through this fall in 1919, I now went ahead. But, failing to keep sufficiently far to the left, I did not succeed in finding the quickest way through, with the result that, to escape from its clutches, we finally had to resort to the spare rope to descend a bergschrund which must have been nearly 50 ft. high. From there onwards all was plain sailing. A glissade and a gentle walk over the nearly level basin of the glacier led to the top of the moraine, whence, free from the sodden rope, we plunged down towards the corner of the W. ridge of the Tête de Valpelline, at the foot of which stands the Cabane d'Aosta. The ten minutes' uphill walk to the hut was, for three weary mountaineers, as hard a pitch as any they had tackled that day. The hut was none too tidy, but we had food and, some kindly climbers having provided us with sufficient wood, we were able to cook quite a passable meal. The weather did not actually break that evening, but the whole sky was filled with dense masses of cloud driven up by the S. wind, and we went to sleep expecting to have a lively time in crossing the Col de Valpelline on the following day.

Next morning we were under way at 6 A.M., and in less than three hours had gained the Col de Valpelline. The sky was completely overcast and all major summits were hidden in cloud, but we suffered no inconvenience from mist and, in under four and a half hours after leaving the Cabane d'Aosta, were receiving the warm congratulations of the Schönbühl hut-keeper, who had watched our ascent through his telescope with such assiduity that he had strained his right eye and was now in a state of perpetual wink!

THE SCHALLIGRAT.

BY SIDNEY YOUNG.

(Read before the Alpine Club, June 7, 1921.)

I HOPE that the title of my paper this evening will not have led you to expect too much, but I am here to fill a breach ; if it falls below your expectations you must blame our Honorary Secretary.

In June last I went out to Switzerland, and after spending a fortnight at Grindelwald and a fortnight at Saas Fee, at both of which places I did a little climbing, I made my way over to the Weisshorn Hotel at Randa.

I had never been to the summit of the Weisshorn, although I had tried it on two previous occasions, the last time in 1912 by the ordinary route, when, after eight hours' hard work, the weather compelled us to turn back not far from the top.

The Weisshorn has, I think, always appealed to me more than any other peak in the Alps, and each of my attempts had made me only more keen on trying again, although my ambition did not soar above an ascent and descent by the ordinary route. I had quite made up my mind if I had not accomplished it last year to go straight out to Randa in 1921, and wait there until I did succeed.

Shortly after my arrival at Randa in July, I found that the first ascent for the season had just been made, and as the weather was fine on the afternoon of July 16, I went up to the hut with my guides, Alois Pollinger and Franz Imboden of St. Niklaus. On the way up the weather got better and better, and by the time we arrived at the hut I heard Alois muttering something about the Schalligrat to Gabriel Lochmatter and another guide who had come up with a Japanese climber likewise with the idea of ascending the mountain by the usual S.E. arête. Whispers soon developed into conversations, and, to cut a long story short, during supper we were discussing the possibilities of ascending by the Schalligrat, and after supper, as the weather still looked good, we all decided to have a try at it by that way. Consequently we went to bed early, and arranged to get up about one o'clock, which we did, had some coffee, and made a start between 1.30 and 1.45.

The line of approach to the Schalligrat crosses the great southern buttress, which intersects the Schalliberg glacier. We reached the Schalligrat, slightly above the Schallijoch, just as it was getting light—I should think about 4.30—when we had some difficulty in getting off the glacier on to the rocks. I believe this frequently happens, as I understand that some years ago, when *descending* the Schalligrat, our Honorary Member, Signor Cav. Guido Rey, and Daniel Maquignaz were held up by a huge crevasse, and spent the night out.

I shall not attempt to rival the graphic description of the climb given by a very regular attendant and speaker at our meetings—I mean our sometime Vice-President, the late Mr. Broome. He enumerates quite a little regiment of towers that have to be turned or climbed. The simplest way is to turn the first few, which are not very pronounced, by traversing on the rather inviting and not really difficult E. or Schalliberg flank. In this way the main arête is gained in about $1\frac{1}{2}$ hours at a little window in the arête. From this point the rock-climbing is of sustained interest. One formidable gendarme has a great upward-slanting semi-spiral gash in its Zinal side. Up this gash the leader crawled almost under cover, until he disappeared to emerge on the ridge above. Another great square-cut pillar of a gendarme, some 12 ft. high, was climbed with considerable difficulty by a crack in its face.

After about $2\frac{1}{2}$ hours going (I did not keep any detailed notes or times, as I was climbing gaily, never dreaming in my innocence of being required to give an account of myself before this technical and critical audience) we arrived below the great yellow gendarme, or rather 'tête,' which is so marked a feature. This 'tête' is not on the direct arête. It is just where the arête makes a bend to the W., and is not necessarily climbed. A traverse of about half an hour on the Schalliberg face brings one back to the arête. The next tooth can also be turned on the same face, by a difficult slab, and the arête regained above it in a quarter of an hour. A further traverse on the same face, close below the crest, can be made which brings one back in about three-quarters of an hour on to the arête, at a well-marked little gap.

From this point the line is along the actual crest, decidedly hard, steep slabs, and up a chimney, in the centre of the arête. This last $1\frac{1}{2}$ hours is much the most difficult part of the climb.

Our pace had been fairly steady, getting, however, a good deal slower as we neared the summit, and the halts becoming more frequent—sometimes for a drink and at other times to

admire the view. We reached the top about 12.30, or about 11 hours after leaving the hut. I should think altogether our halts totalled $1\frac{1}{2}$ hours, so it left $9\frac{1}{2}$ hours for the actual climbing.

I am afraid that those of you who have made this ascent will think the pace was slow, but it was entirely my fault. My Japanese friend was like a young chamois, and Alois and the other guides would, I think, have liked to go rather quicker, but they were all much too polite to say so. As a matter of fact, I had slightly strained myself in doing the traverse of the Portjengrat a few days before. I was a bit tired, but after a rest of half an hour and something to eat and a little brandy to drink, I was soon myself again.

We came down by the usual S.E. ridge at a very easy pace, and reached the hut about 5.30, where we had a meal, and got down to Randa about 8.30, after about nineteen hours of very hard work, which included some of the best climbing I have ever had.

I cannot find anything in the JOURNAL about this ridge of the Weisshorn except Mr. Hartley's paper in 'A.J.' viii., on the expedition in 1877, when Sir Edward Davidson, Mr. Seymour Hoare, and he made the first ascent of the upper and more difficult part of the arête; and Mr. Broome's paper on the first complete ascent by this ridge in 1895. Mr. Broome told you then that he only kept shirt-cuff notes, and I kept no notes at all, as I did not happen to be wearing a shirt with cuffs, so that I am really worse off than he was—but I have very vividly in mind the number of 'gendarmes' we had to go over, and a few that we turned as he did on the E. side, with, I think, a single exception. There is also an account in the *Zeitschrift* of the D. and OE.A.V. for 1907, of a traverse of the Rothorn and of the Weisshorn, ascending by our ridge, on two consecutive days in 1901, by Herren Pfann and Christa. They had arranged for two of their friends to meet them on the Schallijoch with blankets and provisions. These friends, however, bivouacked 2000 ft. below the Col, leaving the two climbers to sit out all night. Nothing daunted, they completed their task next day.

On our ascent, speaking generally, the rocks were in excellent condition. There was only one contretemps, and that was in going up a very steep bit. A stone weighing about a hundred-weight came loose directly I put my weight on it. I managed to keep it in place till Alois came to my help, although I got my fingers crushed a bit.

As I have already said, the traverse of the Weisshorn by this route is an undoubted fine climb, and is one that I strongly

recommend, especially to the younger members of the Club ; but don't do as I did, and attempt it in your first season for seven years, when you are the wrong side of fifty.

The view was magnificent, especially of the stupendous western or Zinal face of the mountain, and of the striking great gendarme on the northern arête.

I should like to remind you that the guide who accompanied me, Alois Pollinger, is a son of the Pollinger who accompanied Messrs. Hartley, Davidson, and Hoare on their famous climb in 1877. Alois was also, as most of you know, Mr. Broome's guide for a number of years, and I am sure I have to thank him for the success of my venture. In fact, it was much more his climb than mine.

Before I close I should like to acknowledge my grateful thanks to Captain Farrar for his very willing and material help in the preparation of this paper. I expect that some of you who know him well will recognise quite a lot of his phraseology ; in fact, it is practically Pollinger's climb and Farrar's paper.

THE BRENVA FACE OF MONT BLANC.

By J. P. FARRAR.

THE 1911-12 Anglo-Saxon onslaught on this face is fresh in our memories.

It produced a literary outburst, viz. :

1. My summary of the known ascents ('A.J.' xxvi. p. 171 *seq.*).
2. Narratives of ascents (*ibid.* p. 203 *seq.*).
3. Dr. Wilson's paper, 'The Col de la Brenva' (*ibid.* p. 264 *seq.*)—a narrative of an expedition in 1904 by Wicks, Bradby, and himself, which, like Mummery, Collie, and Hastings' ascent of 1894, is a glorious page of English mountaineering attainments.
4. A record of Mr. Coolidge's ascent in 1870, with some topographical notes by Dr. Wilson and myself (*ibid.* p. 428 *seq.*).
5. Mr. R. W. Lloyd's paper (*ibid.* p. 431 *seq.*) describing his momentous *descent* of the face.
6. My paper in 'A.J.' xxviii. p. 306 *seq.* on some topographical points.

Until 1919 the face was immune from onslaughts by axe and pen. Early this year M. Claudius Joublot, the able *rédacteur en chef* of the *Revue Alpine*, was good enough to send

me the *Revue*, vol. xxiii. No. 4. This revealed a previously unrecorded ascent—the first by a Frenchman, whether monsieur or guide—made by M. J. Manoury on July 19, 1906, nine days after Mr. Ryan's ascent.¹ The guides were Camille Ravanel, Jean Amiez, and A. Ravanel (porter), all of Chamonix. From the Géant inn the party, hindered by mist, took to the foot of the buttress (3 to 9 on illustration, 'A.J.' xxvi. opposite p. 203²) nearly 6 hours; main arête at c. 4000 m., c. 2½ hours; summit and down to Vallot hut, c. 9 hours.

But the same *Revue* contains an account of an even more interesting expedition made on August 21, 1922, by MM. Tom and Jacques de Lépiney and Dr. A. Migot, without guides, viz. the passage of the Col de la Brenva, the hardest Col and one of the most strenuous expeditions in the whole Alps. The brothers de Lépiney, Dr. Migot, M. Henri Bregeault, M. Lagarde, and M. Savard are among the most active spirits in the Groupe Haute Montagne of the C.A.F.—a group which has done great things towards the splendid, if still limited, revival of enthusiasm and enterprise in French high mountaineering. Nothing is more gratifying to us Englishmen than to read of their exploits, among which is the completion of Mr. Geoffrey Young's attempt on the Col des Nantillons, mentioned elsewhere in this number—a rock climb of the highest class. To no one will we more willingly cede the entry upon a domain like the Brenva, which up to now has been a sort of reserve of ours.

The party left the Géant inn at 0.25 h. and gained the Col at 14 h. The narrative is a most workmanlike production, and enters into the closest technical detail, the following of which is eased by a marked sketch.

Arrived at the point where the Wilson party was cut off by a wall of séracs and forced to make the memorable traverse to the Col, the French climbers found 'l'aspect des lieux a beaucoup changé depuis leur ascension: il n'y a point de glace lisse cette année. A une quarantaine de mètres au-dessous de nous, dans la branche droite du fer à cheval, c'est à dire dans la cascade de glace, existe une sorte de crevasse qui permettra de gravir le versant opposé du couloir et nous fera accéder à une pente formée de glace grumeleuse irrégulière; nous traverserons cette pente pour arriver à un

¹ Accordingly the ascents No. 11 onwards (*A.J.* xxvi. 175) must go down a place.

² See also sketch, *Revue*, p. 159.

second mur de séracs peu élevé (environ 5 m.) dans un angle dièdre où un cône de blocs écroulés monte au niveau de la neige . . . et cette neige, c'est celle des douces pentes aboutissant au Col de la Brenva.'

In the same *Revue* are some 'Notes sur le versant de la Brenva du Mont Blanc' by M. Jacques Lagarde. They deal with the subject in a more complete and much more critical manner than did my summary in 'A.J.' xxvi. 171 *seq.*, and are, in effect, a précis of the narratives of previous ascents.

M. Lagarde distinguishes :

Route I. Moore, 1865.

Variation (1) Ryan, 1906.

(2) Güssfeldt, 1892.

(3) Caesar, 1911.

(4) Lloyd, 1912.

(5) Coolidge,³ 1870.

Route II. Gruber, 1881.

Among guides, Adolphe Rey has made two, Emile Rey two, Daniel Maquignaz two ascents, and Joseph Pollinger one ascent and one descent. Mr. Lloyd is the only traveller to have faced the expedition twice. There have now been three guideless expeditions, viz. 1894, 1904, and 1922.

Both papers, admirably documented, are great contributions to one of the most magnificent ice-climbs in the Alps—a great memory to its devotees, a great hope for its suitors.

The G.H.M., newest brotherhood of mountaineers, may rest assured that they will find nowhere keener and more interested admirers of their work or more assiduous readers of their admirable narratives than members of the older Club.

A WINTER ASCENT OF MT. COOK.

MR. R. L. WIGLEY, with the guides Frank Milne and Murrell, left the Hermitage in perfect weather on the morning of Thursday, August 9, and reached the Ball hut at 4.30 A.M., Friday.

³ My expedition in 1893, led by Daniel Maquignaz and Klucker, appears to have followed the line of Mr. Coolidge, led by Almer, which is satisfactory!

'From this point to the foot of the Haast Range . . . snow conditions were against us, the surface being too hard to use the skis, but not hard enough to bear our weight. . . . In some places the snow was very steep, and in others it presented an even coating over very steep rocks. We arrived at the Haast Hut too late to make any preparations in the way of kicking steps over Glacier Dome in readiness for climbing Mount Cook next day.

'Saturday, however, was spent in kicking steps over the Dome and round Silber Horn corner. . . . Sharp at 4 A.M. on Sunday we started off and tramped to the top of Glacier Dome.

'From here we skied to the Silber Horn Corner, and found ski-ing in the dark a most novel experience. Leaving our skis at the foot of Silber Horn we started off in the steps kicked on Saturday, and by daylight were well up the Linda Glacier. From this point on, conditions were fairly good, the snow being very soft. The prospects of reaching the top looked good. Several recent avalanches were crossed. . . . Some of the crevasses on the Linda Glacier are of great size, and absolutely magnificent. . . . The summit rocks we found in good condition, which luckily made climbing good. We halted a few minutes for a bite of bread and cheese and a drink from our water-bottles, which we had previously filled with cold tea. . . .

'Resuming the climb, we found the rocks were ice-glazed and very steep, but otherwise conditions were good right to the summit, which we attained at 1.30 P.M. . . .

'It was a glorious day, giving great visibility. Both coast-lines were clearly seen, as were also numberless peaks both north and south, Mount Aspiring being particularly noticeable. . . .

'At 1.50 P.M., after taking several photographs, we left on the return journey to the Haast Hut. . . .

'The rest of the journey was accomplished without incident, and after climbing over soft snow and ski-ing across the Hochstetter Plateau, we arrived at the Haast Hut at 8 P.M., very tired but very pleased with ourselves.

'Next morning we glissaded from the Haast Hut right down to the glacier and skied from here to the Ball Hut, and thence to the Blue Lakes, where we were very thankful to find the horses waiting for us. We were away from the Hermitage for five days, and had glorious weather the whole time.

' . . . On the day we climbed Mount Cook, we found the "wind clothes" used on Shackleton's expedition very good, being put on over our ordinary clothing. It may give you some idea of the temperature when I state that, on getting back to the Haast Hut, one of the party had to leave his socks in his boots, as they were frozen solid through the leather. We were very lucky in having such a glorious day. With a wind, it would no doubt have been so cold that we would have had to abandon the climb.

' We did not expect to be able to do the ascent from the Haast Hut in the excellent time of 16 hours. The record time for a summer climb was made by Lieutenant Gran with Guide Graham in 13½ hours. . . .

' I was blessed with two fine companions for such a trip, in Messrs. Milne and Murrell, but the success of the whole trip was due to Frank Milne, who is an absolute marvel on ice and rock and has a wonderfully fine judgment for snow conditions.'

(Curtailed from the narrative in *The Dominion*, August 18, 1923.)

EXPLORATIONS IN THE MOUNTAINS OF EASTERN SPITSBERGEN.

By N. E. ODELL.

THE sledging journey into Eastern Spitsbergen undertaken in 1921 ('A.J.' xxxiv. 102 *seq.* and 506) had been regarded by R. A. Frazer and the writer as merely introductory and preliminary to a bigger attack on the unexplored parts of this region, to be carried out when opportunity offered at a later date. The opportunity presented itself this summer, when an invitation was received to join the Merton College (Oxford) Arctic Expedition and also financial assistance was forthcoming from generous friends in the Club. A party of four seemed to us the best working unit, and we were fortunate in getting A. C. Irvine and G. Milling of the Oxford Boat to join us.

The original plans of this year's sledging party provided for a journey into Northeastland to explore the inland ice cap, partially crossed only by the Swedish explorer and geologist Nordenskiöld in 1873, as well as to traverse if possible the unexplored region of Eastern Spitsbergen and come out on the western side of the main island at the head of Ice Fiord.

It was realised that the whole programme could only be carried out in the event of a very good ice year in the polar seas, which in particular would enable our crossing of Hinlopen Strait to be effected by the awaiting sloop, or by small boats, should the sloop have to retreat on account of the approaching pack-ice. To safeguard the latter proceeding in the event of delay owing to adverse conditions, it was intended initially to establish dumps of provisions on either side of Hinlopen Strait.

Arrived in Hinlopen Strait at the end of July it was found that the whole of the Northeastland shore for a varying distance of 2 to 4 miles out into the strait was blocked with drift-ice. It would have been possible for us at some points, though not without difficulty, to have landed on the drift-ice and so have reached the shore. But at the pre-determined site on Northeastland for the laying of the provision dump, chosen on account of its proximity to the Foster Islands and the narrowness of the strait at that point—an important consideration if on the return journey the strait should have to be crossed by small boat—it was found that the disposition of continuous ice and open leads was continually changing owing to a considerable current from the S. We waited for twenty-four hours to see if conditions would change and allow of our attempting the Northeastland part of the programme without undue risk. But time being pressing and no indication of a change in the ice conditions forthcoming, it was felt to be unwarrantable to delay the sloop further for the special benefit of the sledging party, since the sloop party had a very full programme of exploration, scientific work, and hunting to carry out. In order therefore to free the latter of all anxiety as to the welfare of the sledging party, since the conditions for retreat from Northeastland by small boat across Hinlopen Strait were distinctly unfavourable, it was reluctantly decided to give up the Northeastland project, and proceed forthwith with the programme for Eastern Spitsbergen.

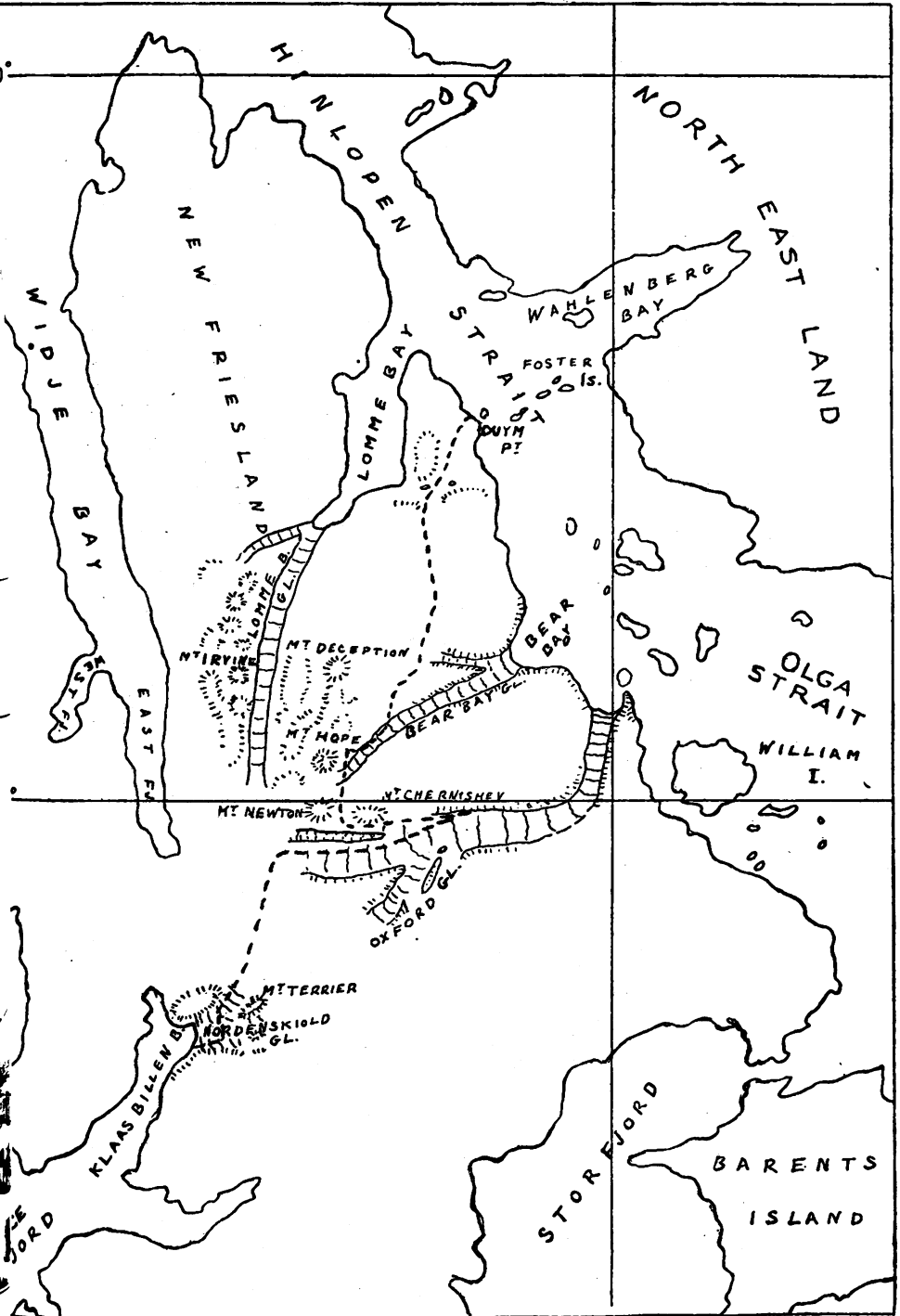
At the western end of the Foster Islands at Cape Duym on the mainland a break in the long line of glacier ice-fronts was noticeable as affording a possible landing for the sledging party, and here after a short reconnaissance ashore the disembarkation of stores and equipment quickly took place. Bidding us a grand farewell, duly celebrated by a sumptuous dinner off eider duck and reindeer, the sloop sailed away, leaving us to our task of surveying topographically and geologically the unknown region of Eastern Spitsbergen lying

between the Lomme Bay Peninsula and the Chydenius Range away to the S. Our plans were to make as direct a line southward as the topography and complex glacier systems would permit, with frequent journeys right and left of the line in order to include in the survey as wide a stretch of the region as possible.

For the first ten days on the journey inland neither the weather nor the running conditions were by any means good, the way lying over hummocky glacier often in a very waterlogged state, necessitating constant deviations and careful handling of the sledges. Over the whole of this section our heavily loaded sledges, with their scientific instruments, six weeks' food rations, and general equipment, had to be relayed one at a time, thereby in reality trebling the distance to be covered. Incidentally it may be mentioned that included in the equipment was a small wireless set—a feature new to polar-sledging work. By means of it we were enabled to 'receive' from the sloop at a pre-arranged time daily and hear the whereabouts of our companions, though of course in the absence of any adequate power unit we were unable to transmit—at least to the necessary distances involved.

Several interesting features presented themselves on this section in the southern part of the Lomme Bay Peninsula. A noteworthy one was a frozen glacial lake that barred our way, extending as it did across the full width of the glacier. Its surface was broken in various parts into enormous ice-blocks piled together in wild confusion, with wide stretches of undulating ice between the piled masses. All around the lake was an obvious 'high-water' mark where the frozen surface had formerly stood, and now, owing to the draining of the water beneath, had sunk 50 ft. or more. The method of this drainage was not apparent until on ascending a neighbouring height another glacial lake, distant about three miles from the former and lying at a lower elevation, was seen to be in a state of great commotion, its surface being studded with whirlpools and one in particular larger than the rest. The two lakes were separated by an ice-col, and at some time not long previous to our arrival a movement in the glacier must have opened a sub-glacial channel which allowed of the pent-up waters of the upper lake draining beneath the col and emerging from below the ice basin of the lower lake with a force sufficient to create the whirlpool, the roar of which could be heard several miles away. We came across several of these lakes with their gigantic ice wreckage, and they were

20°



EASTERN SPITSBERGEN. SCALE 1:1,000,000. APPROX. SLEDGE ROUTE.

never more impressive than when suddenly encountered in a fog, but only this one example had the mechanism of its formation so strikingly demonstrated.

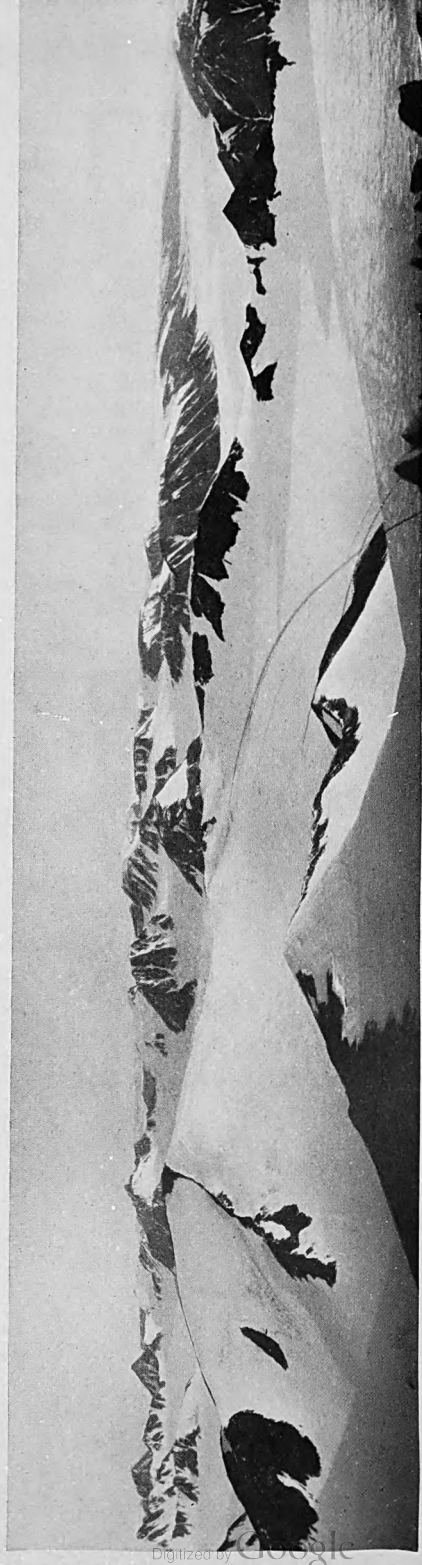
Another remarkable sight not far from the E. coast was the washing clean from the glaciers of their winter snow covering, such that every glacier owing to surface contamination appeared jet black instead of the normal bluish tint.

To the S. of the Lomme Bay Peninsula we crossed a high undulating stretch of country consisting of vast snow-plateaux and ice-domes—a detached and outlying portion of the highland ice-cap of New Friesland to the W. and N.W. Here the travelling conditions were at their worst, the snow being of such a consistency that large masses stuck to the sides and undersides of the sledges and piled up in front of them. Our skis similarly got clogged, and we were forced in the end to use crampons, only to sink in above our knees. On the more level areas there occurred numerous morasses, where one sank into the watery snow-mush without warning. In one such place the writer had suddenly sunk to his waist, and his companions had the audacity to photograph his struggles, beset as he was with skis, before attempting rescue! And to add to our difficulties we were at times forced to find our way in thick mist entirely by compass for hours and days at a time. These mists vary peculiarly in character from being sometimes wet and at other times extremely dry. The writer remembers once drying his wet sleeping-bag in the space of ten minutes in a thick fog by merely laying it out on the stones. And in general it may be said that the climate of Spitsbergen is of that invigorating dry cold character, the temperature rarely falling below about -8°C . in summer even in the eastern parts, and usually being in the neighbourhood of 0°C ., though rising higher at times when the sun is shining and the air still. Blizzards at times occur, but are confined to the northern and eastern parts. Actual precipitation either as snow or rain is slight, except perhaps along the W. coast, and in reality it may be said that Spitsbergen is at present undergoing a period of desiccation, a factor no doubt that is mainly responsible for the widespread shrinkage of the glaciers.

On reaching the higher interior the weather and with it the running conditions improved, and we were able to make better progress, travelling more frequently on skis and pulling both sledges coupled up together, or separately with two men apiece according to circumstances, and at times with sledge sails set, taking advantage of a favourable wind. We were



Panorama from Mt. Hope looking from S. to W., showing Mt. Newton and Bear Bay Glacier (total about 180°)



Panorama from Mt. Hope looking from W. to N. Lomme Bay Glacier seen flowing towards Lomme Bay on extreme right background.

extremely fortunate in having perfect weather for mapping the very complex topography and geology of the region immediately to the N. of the Chydenius massif. The relationships of the great glaciers draining that highly dissected region—two at least of which, the Bear Bay Glacier (main branch) and the Lomme Bay Glacier (southern branch), are we believe more than 30 miles long—will, we hope, emerge from our photogrammetric survey. Amongst other ascents Mt. Newton, probably the highest peak in Spitsbergen, was climbed by Frazer and Milling, and a valuable round of panoramic photographs taken, including details of our survey of 1921 to the S. To the N.W. of Mt. Newton exists a group of high rock-peaks little short of 6000 ft., and of such truly alpine aspect that their existence came as a surprise in a region where great snow-domes and broad ridges are predominant. A day which will have lasting memories for the writer on account of its pleasure and interest, apart from the acquisition of important geological evidence, was that on which Irvine and he skied off about 13 or 14 miles from camp in a westerly direction, crossed the great Lomme Bay Glacier, and at the head of a tributary glacier ascended a fine rock-summit situated in the above-mentioned group. The ascent by the S.E. ridge gave 3000 ft. or more of magnificent climbing on hard metamorphic rock and was rather reminiscent of the Tower Ridge of Ben Nevis on a larger scale. From its summit we had a commanding view over the whole group and away across Widje Bay and the vast snowy uplands of Central Spitsbergen to 'Three Crowns' in Western Spitsbergen, 100 miles distant. This imposing array of rock-peaks situated between us and the East Fiord branch of Widje Bay was a sight which held our attention for some time. There was one huge tower in form like the Matterhorn as seen from Breuil, and right and left of it sharp crests as impregnable-looking as the Weisshorn or the Chamonix aiguilles. We descended from our peak by the steep N.E. ridge which gave a sporting way off over alternate rock and sharp snow crest, and then traversed round beneath the great eastern precipice to the point where we left our skis, and so back to our far-distant camp by the light of the midnight sun, whose rich golden rays mingled with the deep purple shadows thrown by the surrounding mountains and subtly blended with the delicate opalescent tints diffused from the glacier surfaces, formed an ineffably beautiful scene not to be experienced in lower latitudes. These arctic mountains without doubt have gems that the Alps can never

offer! To the writer also not the least factor in their charm is their remoteness and the feeling that one is the sole undisturbed and undistracted worshipper at their sanctuary.

A particularly interesting occasion to the two of us who took part in the sledging journey inland from the S. in 1921 as part of the Oxford University Expedition, was the ascent of Mt. Chernyshev¹ and the definite linking up therefrom of our two surveys. This was the second ascent of Mt. Chernyshev, which in 1901 had been first reached by the Russian Arc of Meridian Expedition and utilised by them as a geodetic beacon. It was specially interesting finding their records on the summit enclosed in a metal cylinder with maximum and minimum thermometers (the latter of which read -38.6°C. —a rather inconsiderable degree of cold when compared with that recorded at sea level in Spitsbergen, *i.e.* approximately -50°C.), and copies of Russian newspapers. The metal Russian flag had been broken and partly blown down from its position on the beacon. We were also particularly gratified at seeing in the view to the eastward, and ascertained in greater detail on a later ascent further in that direction, the course taken by the Oxford Glacier and its outlet in Hinlopen Strait, a problem that in 1921 we had been obliged to leave unsolved owing to persistent fog. The panoramic photographs taken from Mt. Chernyshev, Mt. Newton, and other summits of the high interior of Eastern Spitsbergen will, we venture to hope, clear up many disputed points in connection with this particular part of the country both in regard to its topography and also the state of its glaciology. As regards its geology the relatively undisturbed state of the rocks has enabled the writer to collect evidence which he hopes will be of considerable assistance in elucidating some of the problems of the Palæozoic rocks of Spitsbergen, the study of which was embarked upon from material collected in 1921.

We had no sooner made the connection with our survey of 1921 and mapped the features around the immense glacier-confluence there existing, than the weather, after a fortnight's perfection, reverted to that state characteristic of Eastern Spitsbergen—thick fogs with intermittent blizzards. We were held up for three days in a blizzard on the eastern slopes of the ice-divide, but eventually made our way, largely by compass,

¹ Spelling of R.G.S. "Permanent Committee on Geographical Names."

across it, until on reaching the head-snows of the Nordenskiöld Glacier it again cleared for us to select the best way down the main branch and its rather complicated series of ice-falls. A strong E. wind sprang up, and for several miles, with sails spread on the sledges, we were carried down at an almost uncontrollable speed, until the constantly occurring schrunds made more wary going desirable. The lower part of the Nordenskiöld Glacier seemed in an even worse state than in 1921—hummocks of the worst description abounding from the foot of the Mt. Terrier nunatak right down to the fiord, besides troublesome areas of crevasses through which to negotiate the sledges. We recognised, however, from certain features, such as dirt cones noted in roughly the same position in 1921, that the actual flow of the glacier had been extraordinarily slow. Our progress down the lower glacier was eventually seen by telescope from our awaiting sloop at the head of Klaas Billen Bay, and a party setting out up the glacier we had a memorable meeting fifteen minutes before the expiration of the appointed day.

In conclusion we wish to express our grateful thanks to those members of the Club who so generously granted us the necessary financial assistance without which it would have been impossible to carry out that part of the expedition above briefly described.

THE AMERICAN MEMBERS OF THE ALPINE CLUB.

Minutes of Meeting held May 5, 1923.

THE fifth Dinner of the Association was held on Saturday evening, May 5, 1923, at the Tennis and Racquet Club in Boston. The following members were present: Freeman Allen, Allston Burr, Charles E. Fay, J. W. A. Hickson, Howard Palmer, J. Duke Smith, H. B. de Villiers-Schwab, and William Williams; and Mr. Flichtner attended as guest.

Mr. William Williams announced his desire to retire from the chairmanship after two years' service. Professor Charles E. Fay was then unanimously elected Chairman, Mr. Allston Burr as Vice-Chairman, and Mr. H. B. de Villiers-Schwab re-elected as Secretary. There was some discussion as to whether, in view of the growing number of Canadian members, it would not be well to have a second Vice-Chairman, who would be

a Canadian. Eventually a decision was deferred until the next meeting.

Illustrating his talk with some excellent slides, Mr. Allston Burr read a very carefully prepared paper on Mont Blanc, setting forth the history of the mountain, and dwelling especially on the different routes of ascent and their variations.

After the lecture Mr. Howard Palmer showed a collection of very fine enlargements of the Canadian Rockies, including a number of Mt. Clemenceau.

The sixth Dinner will be held in New York early in December 1928.

H. B. DE VILLIERS-SCHWAB,
Hon. Sec.

11, Broadway, New York City.

OLD MEMORIES : THE COLUMBIA ICEFIELD.

By J. NORMAN COLLIE.

DR. MONROE THORINGTON is certainly to be congratulated on his visit to the Columbia district. It is remarkable that this splendid icefield has received so little attention, for rising out of it are two of the three highest mountains in the Canadian Rockies ; moreover, it is the source of those three great rivers, the Athabasca, the Saskatchewan, and the Columbia. Around it are many other splendid peaks, and numberless are the glaciers that flow from it, down to the pine-clad valleys below, and the camps, as Dr. Thorington says, ' one despairs in the telling of them, they are places to which one will return.'

It is now more than a quarter of a century ago since Woolley and I from the summit of Mt. Athabasca first discovered this lonely land. I had been hunting the peaks north, and ever northward from the Canadian Pacific Railway at Laggan, through a country about which we could find no information. In those days things were very different from now. There was a total lack of knowledge of where the few mountains that had been named by Dr. Hector exactly might be. Mts. Forbes, Lyell and Murchison were somewhere in the beyond, but how to get there was uncertain ; they were ' tucked away behind the foothills where the trails run out and stop.' Beyond were the mysterious lands, unknown and unexplored. In

1896 the whereabouts of even Mt. Balfour was so uncertain that we went to the head of the upper Bow Lake to look for it, and overshot our mark by many miles.

But the call of the wilds was stronger than the love of climbing mountains,

'Something hidden. Go and find it. Go and look behind the Ranges—

Something lost behind the Ranges. Lost and waiting for you. Go!'

In 1897 the something hidden was Mt. Forbes, next year it was to try and win to a great snow peak far away to the north, and seen from the slopes of Mt. Freshfield. After weeks of battling with the rivers and forests, at last we found it, keeping guard over a mighty snowfield—Mt. Columbia. A noble array of peaks surrounded that vast and lonely expanse of snow and ice.

But we had scant opportunity to ascend the great peaks. Looking back to those times, it is with little regret that we did not climb to the summits of more of the monarchs that watch over those far-away valleys. 'Have we climbed those mountains? No, the price was paid us ten times over,' as we wandered free in that land, forcing our way ever onward, through the rivers, or the vast expanses of fallen timber, or across the windy grass uplands of the passes, bright with flowers, whilst always beyond were the mysterious mountains, often half hidden by the drifting mists, and always with the wonder what the morrow would bring forth, the uncertainty of an unknown land.

Snow-draped peaks we passed by, and turquoise lakes set amidst the old pinewoods and ringed round by gaunt precipices, and above, the snow. Wonderful waterfalls that plunged sheer for hundreds of feet into rock-cut canyons where the wild waters raged in fierce tumult. Sometimes the whole undergrowth amidst the black stems of the burnt forest would be aglow with the many coloured 'painter's brush,' or a mass of golden orange daisies would have their colour set against the black satin stems of the charred trunks and a sapphire blue sky. The lure of the wilds always called us onward.

Dr. Thorington too has been caught also by this lure. Although he has conquered many new summits, yet he cannot help seeing occasionally how surprisingly beautiful the underworld in the Rockies can be—'Lakes with a setting that would make an Izaak Walton oblivious of his sport,' or 'a spent

moon hanging over Mt. Forbes in the early dawn,' or his description of Castleguard Camp, 'an Alpine Paradise.'

It is a regret that this delectable land is so far away. But it will be many a long year before much change can happen to the country round Mt. Columbia; it is too far away from the railways. There one will be able to pitch one's tent, and wander free, it may be through primæval forests, or along the shores of a lake, set like some great emerald in dusky gold with the white silk of the snows as a foil, or the forbidding limestone precipices may urge one to try some new and perilous ascent of a mountain. For those who delight in unclimbed peaks there will be plenty and to spare for many a day. And how fortunate we are that there still remains this land of virgin summits, for were we not told in the *ALPINE JOURNAL* (year 1868) that 'so far as the Alps are concerned we can now, I fear, expect nothing free altogether from the taint of staleness. For us the familiar hunting grounds exist no longer, etc., etc.' The Alps have paid the penalty of civilisation. Still, civilised life no doubt is a great blessing, but an occasional return to the wilds will also teach us much that is good for both one's mind and body, much undreamt of in the philosophy of the ordinary man.

In the camp life amidst the far valleys at the headwaters of the Athabasca, the Fraser, and the Saskatchewan rivers, this teaching will come clad in not too strenuous a garb. In that land things are not too easy and not too difficult. In the Himalaya one must be a giant to cope with the vast heights, and one wearies of the immensity of everything. Those, however, who wish to be free from all the unnecessary annoyances of everyday life, let them spend a month camping in the Canadian Rocky Mountains; there they will find one thing at least, that life is worth living, and that for the time being nothing else is worth troubling about.

IN THE OBERLAND AND SAVOIE, 1923.

By GEORGE S. BOWER.

AFTER months of, at times, almost fierce discussion of equipment and plans, Pryor and I, with a feeling of relief that the first pitch was over, collected enough francs of the right type to satisfy an obviously thirsty porter, and secured our seats in a Lötschberg bound train. So thorough

had been our discussion that we had not as yet decided where to begin operations in the Oberland, while Pryor had come to the firm conclusion that, next year, his equipment would be limited to Cockle's pills and crampons. Anyhow, the following afternoon (July 30), we plodded up to the Eggishorn, and, the next afternoon, up to the Concordia, where, judging from the polar aspect, we were in the middle of things.

We started at 3.15 next morning and, not knowing of an easier moraine route, encountered a steep and lengthy slope of hard snow, before arriving on the Ewigschneefeld. The summit of the Klein Grünhorn was reached at 8.30, by a route to the right of the ordinary one, as we had hoped to attain its Gross namesake from the saddle between the two. As it was, we looked long and earnestly at the inviting but distant ridge of the greater and greener Horn, talked 'true mountaineering' to each other for a decent length of time, and—returned to our base, which we reached at 2.30 P.M.

Next morning was stormy, and, judging it useless to go to the Finsteraarhorn hut, we returned to the Eggishorn in continuously improving weather. Yet was the day made perfect, for, it being the Swiss National Fête, the dinner was worthy of the attention of a Fellow of the Royal Gastronomical Society.

The following morning, in beautiful weather, we walked to the Rieder-Furke Hotel along an enchanting path rendered still more attractive by the picturesque summer activities of the peasants. After provisioning, internally and externally, we continued to the Ober-Aletsch hut, following, to our sorrow, a 'path' taken by a man and his guide or rather, we believe, incarnated chamois. We dared not lose sight of our pace-makers lest, at the same time, we should lose what little path was to be found by the foot of faith.

We started at five o'clock, on a damp warm morning for the Nesthorn, got about one-third way up the very intricate glacier, and then judged it best to retire, as the weather was getting worse, and our late start would have made it a rush in any case. Musing on the unwelcome fact that we had, for some time, been making the worst of the doctrine of alternate days, we returned to our hut, perched on its unspeakable moraine.

Re-starting at 3.15 next day and selecting the widest couloir of the several available as being least threatened by séracs, we threaded our way through the maze to the upper snowfield, and reached the beautiful domical summit at 9.40. I

did not envy Pryor his post of last man during the descent, which took us exactly as long as the ascent. Slopes up which one had gleefully clawed in the early morning hours were now reduced to their constituents, ice and slithery snow, and, during the passage of a frail-looking, double cantilever bridge with an unwholesome alternative in the shape of a long ridge suitable for disciples of Blondin, both of us felt that on a glacier 'two's company, but three's bon!' We got down (and up), to Belalp that evening. Nor did we waste our time while in that hospitable establishment awaiting reinforcements in the persons of Pigott and Wood, who arrived the following evening. I doubt whether Solomon could have divided the babe more fairly and impartially than Pryor and I bisected everything put before us.

Next day we returned in state to the hut, accompanied by a porter bearing on his back much bread and *corde* and, in his bosom, a brandy bottle. He was a student relative of the hôtelier, on holiday, and so fast was his pace that we were fain to remind him that we also were *sur les vacances*. He returned to Belalp the same evening.

The Aletschhorn was scaled next day, ascending by the S.E. arête and descending by the S.W. ridge; a worthy initiation for our freshly arrived friends who, I am afraid, did not really enjoy the view from the summit. Their quick work with belays, when I slipped on a step in fragile snow on ice during the descent, proved that their recovery had been swift.

The hut had almost filled up during our absence, so we decided to return to the Belalp, finishing the last stage of our journey by lantern and glow-worm light, and, at its end, making merry over a large dish of raspberries.

After an off day (in the mountaineering sense), we made an early morning descent on Brieg, bathing on the way in a roadside water channel, but with a very poor 'gate.' The Montanvert was reached in the late afternoon, and, owing to the excellent weather, was so full that we considered ourselves fortunate in getting one room amongst the four of us, a circumstance which enabled one man to display his proficiency in the art of tossing for beds. But the next night all of us tossed in bed. We spent it at the Rifugio Torino, a pleasant place, of good feeding withal, and with excellent *gardiens*, but exceptionally full. Pryor and I 'slept' alongside our axes in the Salle des Guides; Pigott and Wood and many many others in the old cabane. I lent them my alarm watch which, with its usual malevolent selection of opportunity, failed to go off,

so that I had to make a journey up to the cabane. At such times how one appreciates the brightly flashing stars and the feeling of being alone with Nature in her sternest aspect ; how cheerful the whistling of the marmots and chamois, hanging about waiting for scraps !

We left the Rifugio at 2.20 A.M. and put on our crampons at the Col du Géant. Before long, words which might have been ' Dear me ; how tiresome ! ' came from Pryor, our trusty leader, and simultaneously, a local softening of the snow was noticeable. One of his crampons had broken and, after an ineffectual attempt at repair, he decided to go ' lippety lop ' until daylight should permit a better job to be made. This was done at the Col du Midi, where the sun overtook us, and whence we could see tracks leading over the steep breast of Mont Blanc du Tacul. To save time we had a moving feast, and engaged ourselves in perhaps the most fascinating part of the expedition. Climbing up steep slopes, passing through white valleys, and traversing over gleaming ice we arrived at a rocky oasis, where we fed and inspected the route ahead, with its sinister sounding ' rimaye parfois infranchissable.' The scenery was so noble as to be almost overpowering, and the shimmering surface above us, together with the cold wind, caused some anxiety, but we found, when we re-started, that everything went quite well including the rimaye (using combined tactics). Here and elsewhere on this route wooden pitons had been driven into the ice, to facilitate the traverse in the reverse direction. From the Col du Mont Maudit we descended quickly to the Col de la Brenva, and began the long and very painful grind up to the summit of Mont Blanc.

' Regulating the pace by breathing steadily through the nose,' Pryor plodded placidly upwards ; I went like a feeble child fitfully following its father ; Pigott at one point managed to raise a whistle ; and Wood went doggedly at it.

The summit was attained at 1.20 and left at 1.30, as gathering clouds and a cold wind did not encourage a stay. The Grands Mulets were reached about 4.30, and here we lay to for the night, very thankful to get real beds for once. The interest of young America in ' Blank ' was very obvious from the writings on the walls.

Next day we returned to the Montanvert *via* Chamonix. It is to be feared that our appearance must have created a very painful impression in that Savoyan fashion resort.

At the Montanvert we learned to our dismay that we were to lose our Edgar, who had to return to England.

Next day (August 18) Pigott, Wood, and I set out for the Col des Nantillons from the Glacier d'Envers de Blaitière, by the route initiated by Mr. G. Winthrop Young¹ with Josef Knubel in 1909, who got to within 500 ft. of the Col when bad weather caused a return. We were unaware that this route had been completed in 1921 by MM. de Lépiney and Savard,² being under the impression that the one ascent from this side had been made by a reversal of Mr. Hoare's route of descent in 1875. Hence we had all the stimulus and joys, at the time, of a 'first complete ascent,' although actually it was a second, and virtually a third.

Technical notes are given in another section of this Journal, but for a complete account of our proceedings the reader must refer to the current number of the 'Rucksack Club Journal' (Vol. V., No. 2), of which the editor is a stern and relentless man, very swift on the intake. Mention should be made, however, of the extraordinary feat of Wood, who carried two sacks, two axes, two pairs of crampons, and two hundred feet of line up about two thousand feet of difficult and, at times, severe rocks, in order to leave me free.

Pigott, of course, climbed with his usual dexterity and speed, with an occasional word of gentle remonstrance to the axe on his wrist. We were all very delighted to get to the Col, and to find that the other side was all right.

The following afternoon was devoted to an experimental study of *pâtisseries* and *glaces*, and their effects on the mountaineer, it being desired to obtain confirmation of much previous work on this subject by the writer and other investigators.

Next morning we made our way slowly and painfully up the lower portion of the Nantillons Glacier. Pigott and I had breakfasted at 2 A.M. on ham and eggs, and, firm believer as I am in our national dish, I now felt that there is a time and a place for everything. Wood, not feeling quite himself, decided to stay at the Col. Pigott and I left our rucksacks with him, provisioned our pockets, and commenced the ascent of the Grépon by way of the S.W. Ridge, which is descended, using the doubled rope at critical places, when the peak is traversed by the ordinary route. At the gap, a little below 'C.P.', where the rocks steepen, we left our boots and proceeded in rubber shoes, after tossing for leadership. The change of footgear was most enjoyable. Climbing was difficult at times, notably just above C.P., and at the lower abseil

¹ *A.J.* xxv. p. 180.

² *Revue Alpine*, [xxii.] (1921), p. 107.

place, but these difficulties appeared trifling when we arrived at the foot of the Cheminée Dunod. We did not purpose the ascent of this steep smooth cleft. Our route was on the left, and was first climbed by Messrs. L. W. Rolleston and H. C. Bowen, with Josef and Gabriel Lochmatter in 1913. It was necessary to traverse from the foot of the Dunod Chimney to a crack about 2 metres to the left, across a steep exposed slab, with the poorest of holds. Preliminary experiment showed only one line of weakness, or rather imperfection, in the defences of the slab. A small flat ledge for the fingers enabled the feet, after a sliding swinging movement, to be placed on a sloping ledge, half-way across. The hands could then reach down to a good crack near the feet, and a further swing enabled one to reach the crack parallel with the Dunod Chimney. This offered no difficulties, and I climbed it to a belay on a ledge some distance up, where I was joined by Pigott, though not immediately. Two cracks now presented themselves. The left hand one was chosen, as appearing the easier; whether it was the original 'Cheminée Lochmatter' appears doubtful. We thus arrived, without serious difficulty, at the foot of the ordinary crack leading to the summit. In an unguarded moment I pointed out the Venetz Crack³ to Pigott, and I was forthwith goaded up it. It is not so bad as it looks from the

³ [This Venetz Crack is the black chimney on left of summit ending under the capstone.]

Mr. Bower, in answer to my question as to how he knew where it was, writes:

'I think Mr. Geoffrey Young told me a year or two ago which was the Venetz Crack. I had not previously done the Venetz Crack. The first time I did the Grépon I was afraid when on the Chemin des Bicyclettes that it was necessary to climb it and was relieved to find the usual crack!'

An ascent of the Venetz Crack was done by Captain G. Finch in 1911. He writes:

'I did the Venetz Crack on Sept. 5, 1911, with my brother Max, mistaking it for the normal way up the summit. I remember that we had no difficulty in starting up the crack, which is not very long; considerably shorter than the Mummery Crack. About 10 feet below the top of the crack, where it is overhung by the stone lying across the flat summit, I had to turn round. I was able to jam myself and help Max up to me by holding his rope with one hand and with my teeth. He was then able to give me support to steady me for the rest.'

Captain Finch has been kind enough to supply the photographs then taken.—J. P. F.]

Rue des Bicyclettes, the most trying part being at the top where, after moving out of the crack on to the left wall over the Mer de Glace, one must keep tired arms extended over one's head until one has made a gritstone-like landing on the flat top. It formed a suitable finish to a little-known route up a well-known peak. From the Col to the summit took us about two hours.

Some time was spent in an unproductive examination of the possibility of reversing the Traverse by scaling the Grand Diable, and then we rejoined Wood, and descended to the Montanvert in time for tea.

Next came the grande finale of the holiday.

For years it had been my greatest ambition to climb the Grépon from the Mer de Glace, the remarkable climb due to Mr. Winthrop Young and party, with J. Knubel as leading guide.⁴ Pigott and I were full of beans and we had been told, moreover, that three Italians had done this climb, without guides, a few days previously. Later I met the Italians, three very pleasant young fellows from Touraine, and learnt from them that they had only done the ordinary route. The belief that a guideless party had succeeded gave us the necessary encouragement to have a shot ourselves. On Pigott's suggestion we cut down weight in every possible way; we climbed on line instead of rope (100 foot and 60 foot lengths), we took no woollies, only one rucksack, and biscuits were carried instead of bread, these being more quickly eaten and more palatable. Best of all, we took ice-axes eminently suitable for a lady tourist intending to make the ascension of the Montanvert from Chamonix. Pigott went down to Chamonix to buy them, while Wood and I went up to the Glacier de Trélaporte to inspect the route. We took the way mentioned by Mummery, past the Doigt de Trélaporte. After an insignificant descent on the other side of the gap, Wood discovered a little 'path' which led us past the ice on to the upper equable surface of the glacier. Seen from here the rock face looked stern and the bergschrund showed a prominent upper lip, so that I returned to the hotel in pensive mood. Pigott returned full of enthusiasm for an ingenious combination of ices—but he had not forgotten the ice-axes.

Pigott and I started out at 2 A.M. on August 17. The way up to the Doigt de Trélaporte was simple and easy to follow in darkness, and the Gap was reached at 4.45 A.M. The berg-

⁴ *A.J.* xxvi. pp. 739-741 with route marked, and *A.J.* xxvi. p. 259 *seq.*

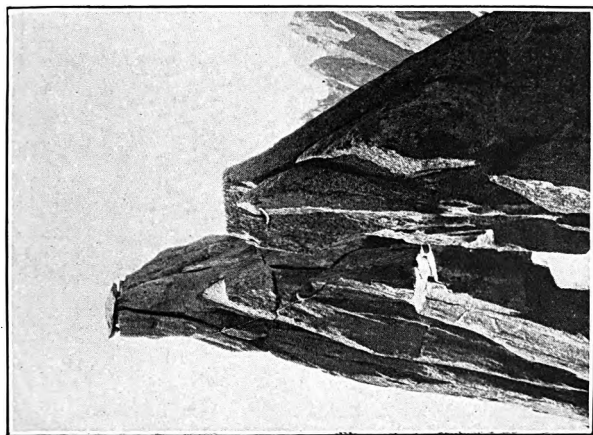


Photo G. I. Finch.

SUMMIT OF GRÉPON.

From Grand Diable.

The Venetz crack is the black chimney on the left, ending under the capstone.

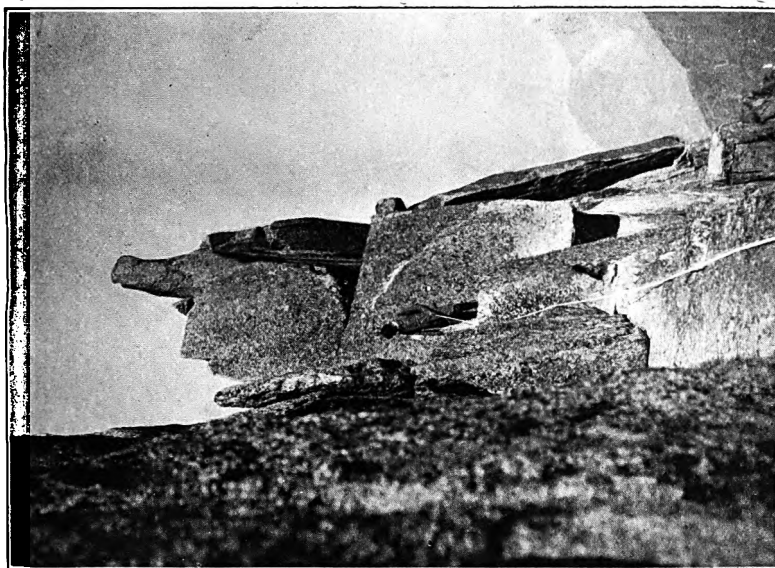


Photo G. I. Finch.

CHEMIN DES BICYCLETTES, WITH GRAND DIABLE IN BACKGROUND.

Grépon.

schrund seemed as if it might offer one ice solution, but we outflanked it by difficult slabby rocks on the right. The steep hard snow above the schrund was very trying. We could not afford the time required to cut steps, so we made progress by driving in the picks of our axes and kicking vigorously to get an inch or so of footing, moving one at a time from stance to stance. Stepping gingerly off a thin blade of snow, we reached the rocks at 6.30, and, on an inhospitable shelf, with our loins girt and piolet on our wrists, ate a hasty meal.

I was surprised to encounter fairly difficult climbing almost at once. It was my turn to carry the communal sack, with axes attached, so Pigott took over the lead. Working to the left, we passed the 'Red Tower,' followed a refreshing rill for some little way, and then climbed slabs until we were about level with an obvious line from the couloir on our left on to the crest of the buttress on its farther side (here assuming definition), which lies to the summit. The problem was how to get into the couloir. Pigott discovered a very difficult but agreeable line, commencing with the slithery descent of a sloping crack. A ledge was then followed to its end (and beyond, by some means) to a belay which was useful for the descent of a steep crack leading down into the couloir, just below a conspicuous chimney. The couloir was ornamented by a rivulet, flowing through shallow marble basins, and near one of these we stayed for another meal, after which we changed over the sack and the lead.

Easy rocks led to the crest of the rib which stretches to the summit with the 'Crag on the Grépon,'⁵ the striking looking pinnacle visible from a gap during the ordinary descent from the Grépon, very conspicuous on its left. Once on the backbone of the buttress one route was available, from which divergence could only be made at a heavy price. The rocks steepened, and the 60-foot vertical crack above the 'Niche des Amis'⁶ gave us a foretaste of what was in store for us. The feet had often to be content with roughnesses rather than definite holds, and the frequency of arm pulls and 'lay-backs,'⁷ even though home-like, was tiring. My most trying time was

⁵ Mummery, *My Climbs*, photogravure opp. p. 150.

⁶ *A.J.* xxvi. p. 261.

⁷ A graphic Americanism descriptive of the method frequently adopted of climbing sharp-edged vertical cracks by pulling hard on the edge or leaf with the hands, and so retaining the feet (largely by friction), on the other wall of the crack and near to the hands. An imperfect example is Amen Corner, Gimmer Crag.

when I shirked a repulsive looking narrow chimney, and chose a crack on the left, which proved to be of great severity. I just managed to fight my way up, not daring to descend, until I was able to reach a hold by means of which I could make a Tarzanesque swing to a ledge at the top of the chimney. Pigott followed up the latter and found it to be all right. Arrived at a saddle in the ridge immediately below the impressive summit wall, I insisted on changing into rubbers, thus adding to the load of my companion. It was cheering to see a party doing the Charmoz traverse. On a lay-back just before attaining the ledge at the foot of Knubel's 200 ft. chimney, I had a slight attack of arm cramp, for the first time in my life. We did not stay to probe the awful mysteries of the chimney, but hurried along the ledge to the left to look for the route taken by the Lochmatters when making the second ascent with Captain Ryan.⁸ This slanted up broken rocks to the right from a point near the end of the ledge, and led us with almost indecent ease to a broad ledge above Knubel's Chimney. At the right hand end of this upper ledge a steep but very rough chimney, followed by cracks, led to a semi-detached block to surmount which Pigott gave me a shoulder, a head, and, unfortunately, a finger. Another swing, at the top of this, completed the difficult climbing up to the Gap between Pic Balfour and the Grépon summit. The Gap was reached at 1.30 p.m., and it was very pleasant to look down on the Nantillons side, and to realise that we were free men, and not potential prisoners of the rocks.

But the weather had been threatening for some time, clouds were lowering over the Verte and the Géant, and gently falling snowflakes had begun to accumulate in hollows, although, fortunately, the rocks remained in good condition. Instead, therefore, of resting and having another good meal, we tried to take Knubel's summit crack on the run, and we left the axes at the Gap. In the lower portion of the crack a rope was jammed in somehow, and, since it seemed firm, I used it vigorously. Here Knubel probably jammed his pick, since it was too narrow for the fingers. Thus one arrived at a 'cave' (in the Lakeland climbing sense of the term), where one could rest below an overhang. To surmount this, Knubel jammed the stem of his axe between two chockstones and then climbed on to his axe, thus reaching good holds above. I threaded my line behind one of the chockstones and tried to treat the problem as a lay-back; but my left thumb was

⁸ *A.J.* xxix. p. 201.

curling up with cramp, and I felt I had not sufficient strength to face the supreme effort required to rise a short distance in this fashion and then transfer myself to a flaky but sound foothold on the left wall. So I descended, using the threaded line, and Pigott had a try. But he too was tired, so he accepted a rope as hand hold from a party on top, which had kindly stood by to be ready to render assistance if required. If the state of the weather had encouraged more protracted trials, a shoulder from a trusty second in the 'cave' (tied to the chockstone), would probably have been effective. Our axe stems were not of suitable thickness to inspire confidence when performing aerial gymnastics in such an ultra-exposed situation: Pigott, who should know, likened the place to the Flake Crack on Scafell. We wasted no time on the summit, but 'abseiled' down the same way, a method used by Knubel which cuts out one abseil and one ascent, and sped down to the Nantillons Col, reaching it at 3 P.M.

The glacier was by now an old friend, our piolettes were quite big enough to scrape new snow from old steps, and, as we descended, the weather improved continuously.

Feeling exceedingly happy we reached the Montanvert at 6.15 P.M.

Pigott and Wood left for England next day; I went to Zinal, but I had had my last climb of the season.

At the request of the Editor a list of names and clubs is appended.

Dramatis Personæ.

A. S. Pigott, Rucksack Club; E. H. Pryor, C.A.F., Fell and Rock C.C., Rucksack Club, S.A.C.; Morley Wood, Rucksack Club; G. S. Bower, A.C., Fell and Rock C.C., Rucksack Club, S.A.C.

CLASSIC COLS.

- (1) THE EBNEFLUHJOCH; (2) THE LAUTHOR;
- (3) THE SCHMADRIJOCH.

By J. P. FARRAR.

I IMAGINE I apply no misnomer to these Cols when I term them classic, since they are fine expeditions, first done by good men long ago. There is no survivor of the only previous passage of the first, and the second and last have been long

neglected; indeed, the serious mountaineering done in the Rottal, excluding the routine Jungfrau, the last few years is a comparatively negligible quantity.¹ Only the names of Williamson, Irving, Fynn, Reade, Hasler, Macdonald, and Davidson occur to me. Yet it is the wildest valley in the Oberland, and offers as steep and forbidding walls of ice and rock as one can desire—men's jobs all of them.

Six years out of a veteran's mountain life are not to be caught up. Two years ago I had a fair season after walking myself fit on paths. Last year Gask and I wandered, with young Camille, Daniel Maquignaz's son, way down east to the Terglou in Jugo-Slavia. Gask must one day tell the tale of our Terglou doings. But after the Terglou my insides struck, in a most unheard-of manner, at the unwonted food, while the bad weather dogged effectively the steps of my companions.

So this year I dawdled about in England and got out to Grindelwald only on August 4—weather brilliant, no agenda, no Climbers' Guides, just a map—imagining, as I had not long landed from a journey through South Africa, East Africa, Uganda, and down the Nile in awful heat, I should be no good. My friends, the Haslers, spend the whole summer from May to September at the Bear—no bad place—and gave me a warm welcome.

The doings for the morrow were speedily arranged. It was to be the Faulhorn—my first ascent of that eminence, Hasler's 115th, at all seasons of the year. The pace he set me, carrying nothing, and he a sack, was so exquisite that I never even blew. We had a great lunch, with a bottle of Mauler, in the host's private parlour, over which Hasler indulged in a long argument as to whether it was his 114th or 115th visit. He was overruled by the charming hostess. By that time I was so built up that, had he proposed to ascend the Wetterhorn then and there, I should have felt quite equal to it. As it was he chose the Simelihorn and Röthihorn for our home journey. The down course was a bit more arduous than the ascent. I tumbled into a bath on my return. Next day was very fine, so was I. In an instant old agenda came back with a rush. I sent for my friend Peter Almer. Next day we went to Gleckstein; the following day walked up

¹ I do not forget the brilliant ascents of MM. Liniger and Lauper in 1921 (*A.J.* xxxiv. 168), and MM. Lauper and Hug's in 1922 in this number.

Wetterhorn—3.20 to 7.55, not bad. I should hate to say how many times I have been up Wetterhorn since 1882. I cannot say it is very attractive, but it is a very old friend, so each year I call. But now I was out for serious business. I was deaf to the suggestions of my friend Hasler—great mountaineer as he is, with more first-rate summer and winter ascents behind him than any of us, and, downhill or uphill, able to walk away from the best—that we should do another ‘walk.’

(1) *The Ebnefluhjoch.*

Two years ago I had spent happy days in the Rottal with the Wills family, and had thoroughly spied out the land. Weather had driven us away. Now was my time. Friday the 10th saw us train for Lauterbrunnen, drive to Stechelberg, and walk up to Obersteinberg in blazing heat. Our goal was Schmadrijoeh; but hardly had we come in sight of the magnificent southern boundary wall of the Rottal than Schmadri was jettisoned: it could wait. There was the Ebnefluhjoch right ahead of us—great classic climb of Hornby and Philpott and Morshead, led by Christian Almer, Christian Lauener, and Jakob Anderegg, fifty-seven years ago. So completely had the Col gone out of mind that I do not think any guide knew where it was, and only my correspondence with the late Mr. Philpott over his delightful ‘*Memories of an Alpine Partnership*,’ recorded in *A.J.* xxx., had taught me.² Having even to co-edit a journal for the most technically informed and critical set of readers makes one learn! I had only to mention to my friend Peter and his well-knit, tireless twenty-nine-year-old son, our chief staff officer—quite often our leader—all the month, that old Christian had made the first ascent and that I proposed to make the second, to make their eyes sparkle with anticipation. They had been with us at Steinberg two years ago, and I had showed them the exact position of the Col.

We were welcomed warmly at the upper inn by our friend of two years ago, Frau v. Allmen, whose brother Karl was killed a few days later with Sir H. Hayden. Then all was crowded; Wills and I lay on straw, which interfered with his slumbers, but not, he said, with mine. Food was moderate.

² I seem, to judge from what I wrote in the *A.J.* at the time, to have been quite an authority on the Rottal and its climbs. I do know something now!

This year the inn, notwithstanding the brilliant weather, was half-empty ; the food, possibly for the half-emptiness, better. We did ourselves well and turned in.

The Obersteinberg (5800 ft.) is, of course, an absurd place to start from for the Ebnefluhjoch (12,800 ft.). I used to reckon that difference a biggish day ; and now, in addition, was the huge round to the actual foot of the wall of the Col. Still, we were out for a classic climb. The conditions were good ; the rocks were dry. We should know how to deal with the obviously difficult ice part ; and I knew of old that I could always draw on a still existent fund of endurance, built up these forty years—I could say fifty—by a will to get there, and a consequent patient submission to hardships and difficulties. We were light, and I modestly forewent any claim to carry.

Hornby and Philpott had started from Trachsellaunen (c. 4200 ft.), lower down than Steinberg, but in straight line for the Col.³ But nowadays the proper starting-place is the Rottal hut, over 9000 ft., whence an easy traverse across the Rottal glacier, over the Rotefluh ridge, and then close along the foot of the Ebnefluh wall, safe enough early, would bring one, in 2 hours at most, to the actual foot of our col. I carefully studied this route from both sides. It will go. I mention a good bivouac place later.

We were off at 3.37 next morning—fine, dark. Follow the Mutthorn path, over a narrow log bridge, for 45 m. till under the big tree-capped rise ; then bear away left by bad cow-path, winding about, and reach the Oberhorn chalet, 5 A.M. Seen right ahead, over the back of a big moraine, is Schmadrijoch. We will call on you another day ! Now up a grass-grown wall and, finally, up a hard-frozen, very steep moraine, and over a bit of glacier to a big grass plot close to the top of the moraines shown on Siegfried at foot of the N. by N.W. arête of the Grosshorn and running nearly to point 2115. Admirable place for a little hut—good water. I would commend it to the notice of the Swiss authorities, as I see did, years ago, Herr F. Beck, in *Jahrbuch S.A.C.* vol. xlv. It would serve Mittagjoch—hardest of the cols—Schmadrijoch, Grosshorn, etc.,

³ We ' went as nearly as possible in a straight line for the Col. . . . We all stood together at the top of the mighty wall up which we had been climbing as hard as we could for nearly 10 hrs. . . . The slope from first to last was extremely steep and the ice- and rock-work in the upper part uncommonly difficult ' (*A.J.* iii. 85 seq.).

and is immune from avalanches. Anyway, we breakfasted 6.5 to 6.30. Right ahead, across the Schmadrigletscher, was the long rocky Schmadrirück. We soon had our first taste of ice conditions on the much crevassed glacier. As we approached the rück one big old chamois, perched on the ridge, observed us narrowly, and then bounded off up the rocks—went groggy—probably an old bullet wound. We climbed easily to the crest of the rück and descended immediately on the other side, down very steep snow, to the unnamed glacier lying to the N.E.

Along the N.E. foot of the rück there had seemed, through the glass, to be a good terrace of snow. The glass lied! We aimed for the crest of the sharp rock arête further N.E. All the ground can be well seen on the photograph taken from Obersteinberg.

Soon we got into difficulties—big schrunds that made us worm about—and it was 9.30 before we reached the crest. The sun now appeared above our col. Proceeding at 10.5, we followed the rock ridge to where it dives under the ice, which was again much broken, needing time for treatment.

We bore away to the left, along the enormous Bergschrund which defends the final slope, the upper lip towering many feet above us, passing above a sort of Heisse Platte, until we found a place at the extreme left bottom edge of the final wall where the schrund looked possible. But its lower lip was covered with small stones, and I did not like it, as the sun was out, and we did not know very much about the shelter we could get on the steep slopes above. I was for turning back, bivouacking on the grass plot, and attacking earlier next day. We had, a little earlier, on my orders, put on young Peter to lead, as Peter the pastmaster has nothing to learn, whereas the young man has his name to make, and will make it. I am a believer in breed, and a better man than old Christian never handled an axe; and his blood has come down. Peter gave me no support beyond 'Sie müssen entscheiden'; and, while I deliberated, the young man was half-way up the upper lip. When he could see over the top he turned a smiling face to our anxious inquiries as to the lie of the ground. We soon followed. The young man wore his crampons. We were too idle to put ours on, as we were too old to fall out of steps. It was 10.30. First came a stretch of ice as steep as you like; then a long staircase band of rocks; then another long ice slope, very steep, which, however, formed a slightly emerging ridge; then more rocks, all

very broken ; then the skyline. It looked no distance. Always optimistic, I put 2 hours. But the ice was very hard ; good steps ; the rocks all loose, slabby, covered with loose stuff, as is the manner of Oberland rocks—steep. I never had a decent hold, or any hold in my hands all day. It was footwork right through, and that never good. No one had ever passed for years to clean up.

The young fellow cut us a good enough staircase up the first ice—hard ice. It is delightful to watch other people do the work better than you ever could, when often you have also swotted and sweated and carried ! And what a place for a well-balanced mind—a real steep slope ! The steps were not as undercut as his old grandfather's and father's, in which you can run ; but he soon improved on our admonition, and thereafter was nearly as good as they. The rocks only wanted care—much care. Stones were coming fairly freely down a slabby couloir away on our left ; away to our right stretched great wide, steep slopes of shining ice. Once, as we were tucked away on some staircase, the young fellow put out his head, to see for water ; he soon put it in ! But, as a matter of fact, after the few steps above the rimaie we had a reasonably safe line—perhaps not so wide as a new by-pass road, but we could steer. We left the rocks for the slight ice ridge before mentioned. Cutting in hard ice, relieved by two rocky islands lying just a bit off the ridge, brought us, bearing always rather to the left, to the next and final rocks. The goal was won ! The rocks were as bad as before, but nothing could hit us, and nothing else counted. They were much longer than they looked ; 2.10 saw us on the col, with only a short bank of hard snow to ascend to the skyline. We were in gorgeous spirits—great day. We had opened old Christian's Col again. We were hungry for more. I had only wandered up, doing no work, carrying nothing, felt nothing.

What whole men these Hornby, Philpott, Morshead, and their like were ! Prodigious walkers, firm as rocks on ice—cool as ice on rocks, faith in their leader profound ; asking little, doing much—inspirers of great deeds. Bad, nearly all of them, in describing topography.

And what men their guides : Almer, incomparable, greatest of guides ; J. J. Maquignaz, his equal in all save pure icework—as a pure rock-climber, perhaps better ; J. A. Carrel, the indomitable ; Melchior, in whom his friends—judges, I admit—could see no fault and no want ; Croz, magnificent in his

strength, but imprudent—in the end victim to his failure to grasp the place of real control; Hans Baumann, von Bergen, Jaun, slightly younger, great craftsmen; Emile Rey, a strange mixture—indomitable courage, great enterprise, much worldly wisdom, good executive ability; Burgener, boldest of all, a great master, knowing when to delegate, always retaining command, yet in the end hurled to death—the need to earn compelling the risk; and many another who played the man in his generation.

They are all gone—the Helvetians mostly dying in their beds; the Savoyards on the field; the Englishmen anywhere in the world where an Englishman dies, forgotten by many—never by us who have realised their joys, suffered their sufferings, and wait.

But what a Valhalla! Upon my word, we shall have some tales to tell them all, and we shall go over our climbs even as we do at our incomparable Club.

What advantages we have! Well equipped; axes, not alpenstocks; exact maps, not vague topographical guesswork; and, above all, the knowledge that the job *has been done*.

Has not Conway, the philosopher of mountaineering, in one of his inimitable papers, pointed out the root difference between attempting a *new* climb and repeating a difficult, only once done, ascent. Perhaps he failed to take into account the accumulated knowledge gleaned from the doings and narratives of our forbears, and tested and added to in our own, which enables one to lay out a line of very probable success. Geoffrey Young, in his marvellous classic, too abstruse for many of us, but which in years to come will justify a claim for mountaineering to be considered one of the fine arts, in which the price of a fault is often death, brings out the point well and does not forget the share Eckenstein⁴ played in this style of investigation, bringing to it, besides great experience, a kind of uncanny intuition.

We ate again and drank. The weather was a bit overcast, and wind on the heights. Our plan to follow the arête over

⁴ I went to see him, as he lay dying, one summer day two years ago, at the little hill-town of Oving. His lungs had gone, he could only gasp; but his eye was as clear as ever, as dauntless as it had ever been in disadvantages of race, often of poverty: facing now, at last, the unknown, dying a brave man—wrapped up to the very end in his beloved mountains.

Ebnefluh to Rottalsattel was turned down *nem. con.* So we set a course for the Joch by a lower route. I insisted on bearing always to the left, to waste no height, and would not listen to Peter's accounts of how Mr. Gardiner and he and his brother had been balked by huge crevasses. I was soon balked. They were huge. So we steered down the Ebnefluhfirn—weather thickening—till all at once there came into view close on our right the Steiger hut of happy memories two years ago. We steered promptly for the front door, and crossed the threshold at 4.30. Somehow my caravan always has food of sorts for an extra day. The very civil gardien found us coffee. We did ourselves all right, and slept a well-earned sleep, not half frozen as two years before.

We left the hut next morning at 4.30 and, at a steady pace over lovely snow—a huge difference from two years ago and other times—were at the Jungfraujoch at 9. On the way we observed the line of the Meyers' ascent of the Jungfrau in 1811 by the Kranzbergfirn, then close under Rottalhorn and over to the 'false' Kranzberg of the ordinary route. I observed it closer, from above, when we crossed the Lauithor. There is, in my opinion, no reason to doubt it. It ought—for form's sake—to be repeated.⁵

We came down by train on my S.A.C. card and the Guides' cards at a pleasing reduction in price. What a marvellous view from Eigergletscher! When they asked you in Grindelwald where you had been, and you told them, you might as well have said Kamchatka for all they knew. The Haslers, of course, were different. Didn't he and Jossi do that terrible slope of Ebnefluh itself, as did that old man with Claude Macdonald? And does not she know even more of the history of mountaineering save of that which he has helped to make? But there are no Boss now—only a very comfortable hotel. A bath put me all to rights and keen on further plans.

(To be continued.)

⁵ See Mr. Coolidge's able monograph, *A.J.* xvii. 392 seq.

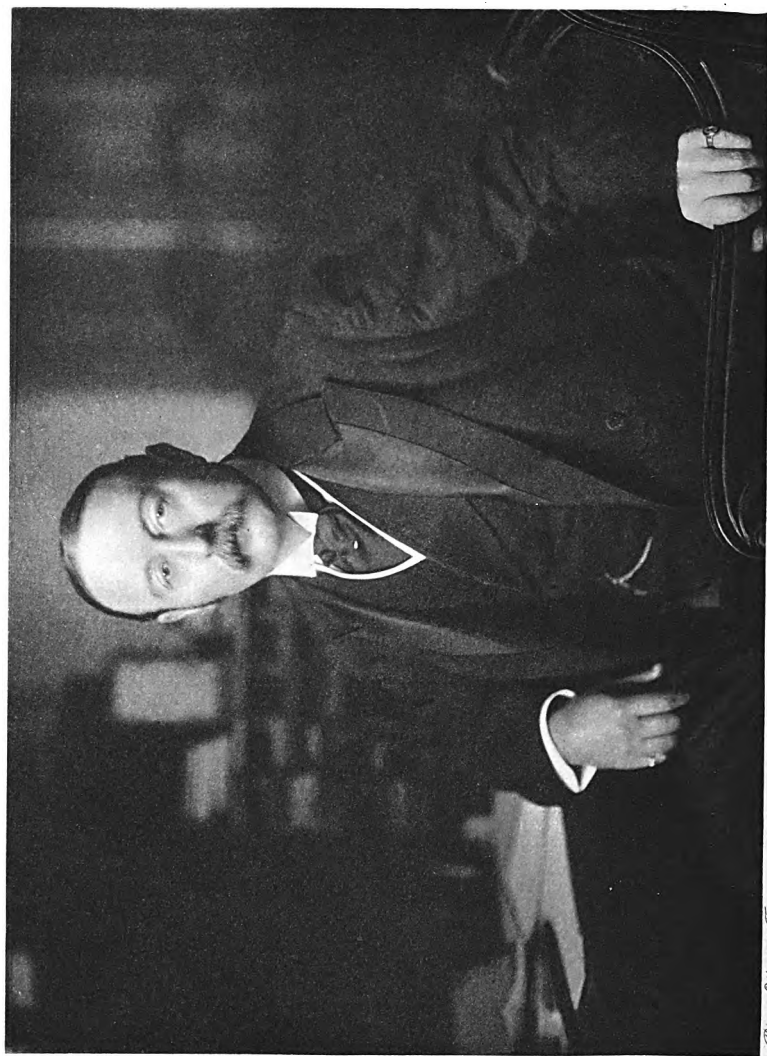


Photo Elliott & Fry

Sir Edward Davidson. C.B. M.C. 86. 86.

IN MEMORIAM.

WILLIAM EDWARD DAVIDSON.

1853-1923.

It must have been in the early 'seventies that I first met Davidson at Zermatt. He was then climbing with his father, and with Laurent Lanier of Courmayeur as guide. The friendship then formed was only broken by his death last summer.

For some years we visited the Alps together, and a more perfect companion, either on or off a mountain, could not easily be found. His knowledge, both geographical and historical, of the various peaks and passes was, even in the early days, surprising, while latterly but few, if any, members of the Club could equal his accuracy on the subject.

Fast and sure-footed on rocks, he was at first more interested in ice-work, and many a happy day was spent on some steep ice-slope or in cutting among the séracs of the Col du Géant or the Gorner Glacier.

The short time taken for the ascent and descent of the Gabelhorn from Zermatt, and the mad race to get assistance after the Knubel accident from the Lysjoch to the Riffel (1 h. 38 m.), when with Jaun we ran down the centre of the Lys Glacier, jumping all crevasses as they came, are proofs of how fast he could travel both on rock and snow.

My memory of our climbs is very imperfect, and all my notes have been destroyed; but among our last expeditions together the recollection of two delightful passes stands out—the Col Dolent and the Col des Hirondelles, both from the Chamonix Valley to Courmayeur.

One thing is ever present to my mind—Davidson's unfailing good temper in any difficulties or dangers. Whether it was dodging falling stones on a new route up the Weisshorn, or painfully crawling *à cheval* along the northern ridge of the Lyskamm, or having to turn back, owing to my sickness, when nearing the summit in an attempt on what was then called the Charmoz, his good humour never left him. How he enjoyed the terror of the many guides at some toy snakes we had taken out to Couttet's—one guide fled to the top of the tower, another, having upset the waiter and all the luncheon plates, was discovered under the landlord's bed, while the rest could not be found for some hours.

After '85 my work necessitated my living in the north, and we only met occasionally until last spring, when I was horrified to see how ill he looked. The enormous amount of responsible work he did at the Foreign Office during the war had taken its toll of him, though when he had tea with me some three or four days before

he died he was cheerful and eagerly looking forward to his visit to the Riffel Alp. Now he has gone, and what is left to me of life is the poorer for the loss of a true friend.

As Adam Lindsay Gordon writes :

‘ Let us thank the Lord for His bounties all
For the brave old days of pleasure and pain
When the world for both of us seemed too small,

Though we never shall know the old days again.’

J. W. H.

Mr. Fitzgerald writes :—

‘ I went to the Alps for the first time in 1869, and have revisited them practically every year since. My memory as to dates, etc., has become very uncertain.

‘ About 1879 Mr. Davidson wrote to me that he would be unable to come out that year owing to his father’s serious illness, and to know whether I cared to engage their guide Laurent Lanier of Courmayeur. I did not know Davidson previously, but I accepted at once his offer of Lanier, and thus a warm friendship between us was formed which lasted without break until his death by heat-stroke early last July.

‘ Thereafter I think we hardly missed a summer together in the Alps, and with Davidson and Holzmänn I continued the game until about three years ago, when I began to feel that I was getting too old.

‘ One year Davidson, Holzmänn and myself, with the Seymour Hoares and the Basgrave Deanes, went to Pontresina. It was then that Davidson and I did the fine expedition from the Roseg Restaurant over the Sella Pass, then ascending the Scerscen and following the arête to the top of Bernina and returning to Pontresina by the Scharte, where we arrived at 1.30 A.M. This latter part was done solely because Klucker wanted to show the Scharte to Ulrich Almer.

‘ Another year we spent a fortnight in Dauphiné, and I have never had a better climb than crossing the Meije.

‘ Another year we spent some time in the Dolomites. I enjoyed very much the ascent of the Kleine Zinne from the North. We also did some peaks from San Martino—fine climbs which I much enjoyed. Davidson did besides a great deal of climbing in the Dolomites.

‘ Christian Klucker was valuable to him not merely as a guide, but also as a courier.’

* * * * *

I propose to deal with the purely mountaineering career of my late friend, and to add a short appreciation of his work. I am fortunately able to annex photographs, which show him at various periods of his life with the guides who contributed so much to his expeditions.



MR. DAVIDSON *père*.
LAURENT LANIER. W. E. DAVIDSON.

About 1874.

He was elected to the A.C. on February 2, 1875, on the qualification:—Matterhorn, Old Weissthor, Monte Rosa from the Gränz Glacier, Mont Blanc, Triftjoch, New Weissthor Alphubeljoch, Col du Géant. He had made a vacation tour in 1873, but the whole of these ascents were made in 1874, so that he was elected on a good one-year list.

On the Col du Géant and Triftjoch, Mr. W. Davidson, his father, took part. Mr. Davidson, senior, used to come out regularly for several years, and made occasional ascents, such as Wetterhorn. His regular guide for some years was Laurent Lanier of Courmayeur (1840–1884), of whom Mr. J. Walker Hartley has written in 'Pioneers' a great notice, while Davidson throughout speaks of him in the highest terms.

The ascent of Mte. Rosa by the rocks missed, by one day, being the first. On the Matterhorn 'we saw the ropes fixed by Taugwalder in the descent in '65, still hanging to the rocks.'

His further expeditions *include*: in

1875, 46 days. First passage of Arbenjoch, from Zinal side. It took 10 hours from the Roc Noir, and involved much cutting—the crest being finally reached away to the W. of Pt. 3657, whence they traversed to the Col, Bruneggjoch, Dom, Wetterhorn, Schreckhorn, Mont Blanc, Weisshorn (attempt defeated by bad snow).

1876, 46 days. Eiger, Jungfrau, Finsteraarhorn, Dent Blanche, Castor and Pollux, Jägerjoch.

1877, 42 days. Grandes Jorasses, Lyskamm, Breithorn (N. face), Rothhorn, Moming Pass, Gabelhorn, Weisshorn (from Schalligletscher).

1878, 46 days. Col de Talèfre (twice), Col du Géant (twice), Charmoz (attempt), [the present Grépon], Col de Miage, Nordend, Mont Blanc (twice), Col Dolent.

This was the first passage of the Col Dolent from the N. side. Whymper's passage, led by Almer and Croz, being from the Italian side, and involved the *descent* of the steep couloir leading to the Glacier d'Argentièrre—a very bold expedition. Sir Edward's note is: 'Reached foot of slope before first Bergschrund 8.30; crossed second Bergschrund and cut up sheer ice slope to rocks on left, about one-third way up couloir. Lanier cut 80 steps in hard ice in one hour. Went thence by rocks all the way to the Col, reached at 10.50. Left at 11.30, reached bottom of couloir [on the S. side] at 1.15 and Chalets de Sagivan at 3.45.'

The Col has been done very seldom since. The guides were Lanier and Jaun, and Mr. J. W. Hartley took part in the expedition. The time of ascent, 2 hours 20 minutes, speaks volumes for all the party.

The Charmoz [Grépon] entry reads: 'Started from Chamouni at 2, and got within 100 feet of top of Charmoz by couloir between the two peaks. Were finally stopped by ice on rocks.' Guides were Lanier and Kaspar Maurer, and Mr. J. W. Hartley took part.

1879—not out.

1880,¹ 41 days. Guide was Lanier till August 21, when an old frost-bitten foot invalidated him, and he was replaced by P. Anderegg. Mr. F. C. Hartley and Hans v. Bergen were of the party.

'Aug. 17.—Started in uncertain weather [from Chalet de Blaitière via Eccles with Michel and Alphonse Payot, W. E. D. and F. C. H. with Lanier and v. Bergen] for Charmoz [Grépon] at 4.45. Got up to Col at 10.45, and top of couloir overlooking Mer de Glace at 12. The last hour difficult. Impossible to get any further without artificial aid. Got back to Chamonix at 5.45.'

It should be remembered that in those days, and for some time later, the whole Charmoz-Grépon chain was termed Aig. des Charmoz (v. Mieulet's map and Kurz's 'Guide,' 1st edit. (1892), p. 107, note 1). The Petits Charmoz were named Aig. de Grépon. The early attempts on this group need re-examination.

Then follows an attempt on the Aig. Verte from the Charpoua Glacier: 'August 20. Started at 3.45 [from bivouac 2½ hours from Montanvert] and went on for 3¾ hours, when we breakfasted at foot of great couloir. Went on till 2.45 P.M., getting on steadily, and were then obliged to turn back, owing to want of time—only just got off mountain in time, and had to leave Lanier's axe and a piece of rope in order to descend the cheminée. We were higher than the Dru when we stopped, and close to the final arête. Got back to tent at 11 P.M.' The party consisted of Mr. Eccles, with the two Payots, W. E. D. and F. C. H., with Lanier and v. Bergen. Further particulars are given by Mr. Eccles in 'Pioneers,' p. 182. The route was completed the following year by Mummery, with Alexander Burgener.

1881, 44 days. 'Aug. 5, saw Mummery at the top of Aig. des Charmoz' [this is Mummery's ascent of the Grépon]. Little was done owing to continuous bad weather. Guide Jaun.

1882, 41 days. Guides, Hans and Andreas Jaun. Col des Hirondelles.

1883, 47 days. Guides, the two Payots and others. Aig. du Géant, Aig. Verte, Grand Dru (guides, Emile Rey and M. Savioz). Time ascent from Montanvert 7 hrs. 25 mins., on top 45 mins., descent 6 hrs.; absent 14 hrs. 10 mins.; nett walking 11 hrs. = very quick time. 'Found peak much easier than I expected. . . . Neither of the fixed ropes are in the least necessary and we didn't touch either of them.' Dossenhorn (guide, Melchior Anderegg).

1884, 55 days. Guides, Jaun and others. Gspaltenhorn, Lauterbrunnen Breithorn.

1885, 30 days. Guides, Jaun and others. Lauteraarhorn, Viescherhorn.

¹ Guides' pay at that time was 8 frs. rest day, 25 frs. for Col, 50 frs. for summit.



W. E. DAVIDSON.

SEPP INNERKOFER,
of Sexten.

CHR. KLUCKER,
of Sils

(1898.)

1886. Not out in summer. Went out in winter to Grindelwald. 'At noon the peasants began to assemble . . . and danced continuously up to 6 next morning, and continued at noon again, keeping it up till 5.30 next morning. In all the two days 2500 bottles of wine were consumed, or an average of five a-piece, including men and women.'

1887, 41 days. Guide, Jaun and others. Attempt on Petit Dru ('the mountain itself is, by very far, the hardest thing I have been on; the whole of it from the saddle upwards is of the very highest difficulty'), Jungfrauoch ('v. Bergen here performed a feat which certainly has never been excelled in the way of iceman-ship, cutting round a corner which absolutely surplumbed for some 200 feet on to a snow plateau below'), Mönch.

1888, 40 days. Guides, Jaun and others. Eigerjoch, Col du Chardonnet.

1889, 53 days. Guides, v. Bergen and others. Roseg, Gussfeldtsattel ('there is no doubt that a first-rate guide would consider it an easier pass than the Eigerjoch, as the wall is certainly not so long—not more than two-thirds at the outside. I am sure that if it had been black ice from top to bottom, v. Bergen and Jaun would have cut the whole of the steps in 3 hours, and I should give them 4 to 5 hours to perform the same on the Eigerjoch'), Bernina (first descent by Scharte), Brunegghorn, Biesjoch, Rothhorn (tr.), Matterhorn by the 'Enjambée des 3 Jean Baptistes,' from Breuil to Riffelalp in the day.

1890, 50 days. Guides, v. Bergen and others. Riffelhorn (thirty-eighth ascent), Triftjoch, Col de la Dent Blanche, Breithorn (N. face), Moming Pass, Mittelhorn, Wetterhorn, Lauteraarjoch, Strahlegg.

1891, 55 days. Guides, Chr. Almer and A. Stähli. Felikjoch, Lysjoch, Zwillingsjoch, Riffelhorn (forty-fourth ascent), Riffelhorn (first ascent by Matterhorn couloir), Jungfrau (from Rottal), Viescherjoch. 'The veteran was wonderful.'

1892, 41 days. Matterhorn traversed from Schwarzsee to Breuil, Mischabeljoch, Matterhorn couloir (second ascent).

1893, 54 days. Jumeaux, Charmoz (traverse), Petit Dru.

1894, 56 days. Trifthorn, Alphubel (second ascent by W.S.W. arête), Matterhorn (traversed, Italian hut to Zermatt), Grépon (traversed N. to S.—guides Alfred Simond and Klucker). It would appear that W. E. D.'s 1880 party was aiming for the Grépon and got into the Col close to the Mummery crack.

1895, 59 days. Klucker was guide for 56 days, and Daniel Maquignaz for 39 days.

Dom Gabelhorn (Trift over Wellenkuppe and Arbenjoch), Matterhorn (by Carrel's Galerie), Dom-Täschhorn traverse, Matterhorn (Z'Muttgrat), Schmadrijoch, Bietschhorn (N. to W. traverse).

1896, 62 days. Klucker was again in attendance. We veterans well remember the terribly broken season. After a few days at the

Riffel and making his ninetieth ascent of the Riffelhorn—in some years he did as many as ten ascents of this peak—Davidson left with Klucker for his first visit to the Dolomites. They ascended Cristallo, Croda da Lago² by old route (descent via Sinegaglia), Sorapiss² by Müllerweg (descent Grohmannweg), Piz Popena³ from Cristalljoch (Klucker considered this difficult), Dreischuster from Innerfeld, Kl. Zinne by N. face, Zwölfer, Elfer, Fermedathurm, Pelmo.²

1897, 62 days. Guides Klucker and Innerkofler: Périades, Cardinal, Langkofel traverse N. to S., Fünfinger-spitze (Schusterweg-N. Kamin: Schmittkamin-Daumenscharte: from Grohmanngl-N. Daumengrat: from Langkofeljoch, up and down). Grohmannspitze (Johanneskamin-Leiterweg), Winkler, Stabeler, Figlio di Rosetta, Cima di Cuseglio, Delago, Santner and Euringersp.

1898, 60 days. Guides Klucker and Innerkofler. Monte Rosa, Mominghorn (traversed to Mountet), Col Durand, Strahl-Rympfischhorn, Hohberghorn-Nadelhorn, Cimone della Pala, Pale di San Martino, Cima della Madonna (Winklerkamin), Gr. Zinne, Tofana (via inglese).

1899, 59 days. Guides Klucker and U. Almer. Scerscen-Bernina Traverse, Ortler from Hochjoch, Königsspitze, Zebbru traversed, Cima Tosa-Crozzon, Presanella, Viso, Ecrins.

1900, 58 days. Guides Klucker and Almer. Schallhorn (traversed) Dent d'Hérens (descent to Breuil), Breithorngrat (traverse), Balmhorn-Altels, Mönch (from Kl. Scheidegg), Riffelhorn (15 times).

1901, 58 days. Guide Almer. Obergabelhorn (Trift to Mountet) Rothhorn (tr.) Riffelhorn (17 times).

1902, 57 days. Guides Jules Lochmatter, Joseph Pollinger and Almer. Breithorn (N. face descended), Weisshorn by Schallgrat. This ascent made twenty-five years after his ascent by the S.E. face evidently gave great satisfaction. It enabled him to fix very nearly the junction of his arête on the S.E. face with the main arête and agrees with my own observations the following year, but I think his estimate of this point being only 800 ft. below the summit is much understated, since my party, travelling fairly fast, took 2 hours 20 minutes, which is the equivalent of 1200 ft. *at least*. Morningspitze (tr.) and first descent from Oberschallijoch to Zinal, Bieshorn, Riffelhorn (17 times including Matterhorn Couloir).

1903, 54 days. Guides Joseph Pollinger and Franz Lochmatter. Much bad weather. Riffelhorn (10 times, making 160 in all), Fletschhorn-Laquinhorn, Südlenz sp., Nadelhorn (Mischabel Hut to St. Niklaus).

1904, 47 days. Guides as above. No particular expeditions.

1905, 57 days. Guides as above. Blaitiere and Meije (traverse).

² Guides Klucker and M. Barbaria.

³ Guides Klucker and Sepp Innerkofler for all the others.

1906, 60 days. Guides Joseph and Heinrich Pollinger. Arbenjoch-Mont Durand, Ludwigshöhe to Sesiajoch (ridge climb), Matterhorn (7th ascent and 6th traverse) by Carrel's Galerie, Riffelhorn (9 times, including new routes).

1907, 54 days. Guides J. Pollinger and F. Lochmatter. Weissmies (tr.), Les Bouquetins, Aig. Rouges. (Guides often lent.)

1908, 57 days. Guides as above. Vincent Pyramide, Pta. Giordani. Much bad weather. Riffelhorn (200th ascent).

1909, 58 days. Guides as above. Aig. de la Persévérance and small expeditions. Much bad weather.

1910, 56 days. Guides as above. Rothhornjoch, Col Durand. Much bad weather. Riffelhorn (218th ascent).

1911, 56 days. Guides Pollinger (34 days), Lochmatter (44 days). Pointe de Zinal. Zinal Rothhorn (from Rothhornjoch), his fifth ascent, Grand Combin. This was his last great expedition, so that his Alpine career proper may be said to have lasted from 1874 to 1911. Riffelhorn (his 229th ascent).

1912, 53 days. Guides, Pollinger (42 days), Lochmatter (54 days). Riffelhorn (his 238th ascent), many walks. Guides often lent.

1913, 53 days. Guides, Lochmatter and Pollinger. Riffelhorn (his 250th ascent), Adler.

The next year came the war. He made his 251st ascent of the Riffelhorn in that year, and his 252nd in 1920; and so the climbing chapter ended, although in 1921 and 1922 he returned to his old quarters at the Riffelalp and held his little court, issuing his edicts, receiving with an old-world charm his old friends and other properly vouched for individuals. To others the *entrée* was not easy.

It is not easy to sum up an Alpine career like his—some will wonder why, with such opportunities, he did not do even more, incomplete as the record possibly is.

Long as his yearly visits to the Alps were, diversions other than mountaineering occupied much time.

His earlier years covered the gorgeous heyday of the Eagle's Nest and of the Pasteur House at Grand Saconnex. Who can ever forget the sweet welcome of Mr. and Mrs. Pasteur and their family? At these houses he was a frequent guest. What chance had a mere mountain when the young joyous life which filled those super-hospitable houses called? Was it not quite good enough to look on Mt. Blanc from the riant slopes of Gd. Saconnex? The restless energies of Jack and Billy Wills must at times have sat heavily on him!

Picnics, cricket matches, dances, took time. To attractions such as these we of the sterner, wandering school were—at least I imagine so—immune.

Many of his Riffelhorn ascents, his threading every intricate way through the Gorner icefall, were, in effect, entertainments for his youthful and other friends. His guides were generously placed at their disposal. He knew every servant at the Riffelalp—they were

his people. It was his second home. He took a keen interest in the kaleidoscope life of a fashionable hotel. Nothing escaped him. | Moreover he was not a climber pure and simple. He was not prepared to sacrifice comfort or forego good quarters. He would take no chances. He would never climb in any but practically certain weather, which, no doubt, made him miss many expeditions. He never came near having any accident, and there is no record of any impromptu bivouac. He was essentially the orthodox mountaineer, attended always by the best of guides,⁴ with a strong tendency to condemn such excrescences as guideless climbing and extreme expeditions. He spent a sedentary life for ten months in the year, and had to make good, in comfort, the wear and tear of a busy life. In his earlier years he was a man of great activity, and, as Mr. Hartley—himself fleetest of foot—tells us, a rapid and sure mover on rock and ice. His expeditions bear testimony to his powers. But as years went by, even at forty, he had great trouble to subdue increasing weight and to get fit. He was, above all things, a Centrist, attached to Zermatt and the Riffel, where he knew everybody and everything.

He had more experience of great guides than any mountaineer. Thus he had in his service at various times, Lanier, Jaun, Rey, v. Bergen, old Christian Almer, Melchior Anderegg, Ulrich Almer, Klucker, Daniel Maquignaz, Sepp Innerkofler, Joseph Pollinger, Franz Lochmatter. His attachment to the two latter was very warm, and he took them year after year, more out of old habit than for any considerable use he made of their services. He remembered to leave them legacies of £100 each.

Mr. J. W. and Mr. F. C. Hartley were his earlier climbing companions, then Mr. Seymour Hoare and Mr. Cullinan, while Mr. Gerald FitzGerald can count upwards of forty years' close companionship with him in the Alps, and was often his climbing companion.

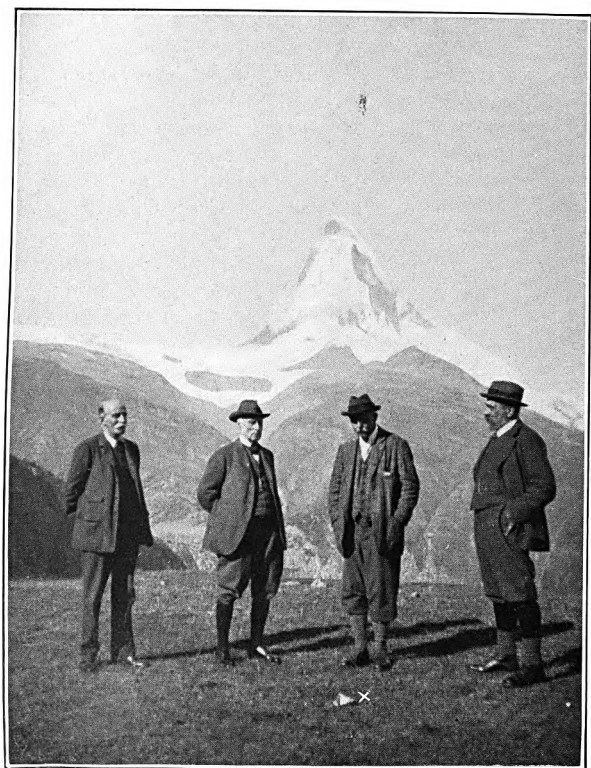
He was Hon. Secretary from 1881 to 1885, but then for over twenty years took no part in the affairs of the Club through some differences, the origin of which has long passed from the memories of men. He was at last prevailed upon to become an extra Member of Committee, where his knowledge of procedure, his great experience, the charm of manner which he could exhibit, soon marked him out for high office.

He was elected President for the term 1911-13. His services as such are fresh in our minds, as are those of Charles Wollaston, the long-time Hon. Secretary who ran three Presidents. He was heart and soul in the Club. I do not think anything counted in his life as did it, and what it represented to him. He was the Club incarnate.

⁴ When the Pilkingtons formed their first guideless party, he was invited to join them—a sufficient testimony, by eminent judges, to his powers, but family reasons forbade his acceptance.



W. E. DAVIDSON
about 1890.



SIR EDWARD AT THE RIFFELALP, 1922.

His help to me with the JOURNAL was never-failing, and his constructive and sound criticism steered me through many difficulties which occur in its production.

He was a man of strong opinions—not to say prejudices. There was a certain hauteur about him, a certain F.O. manner, but he carried it well. No man could take a liberty with him, and there are amusing tales told of his treatment of too *empresé* casual acquaintances. No doubt his return to the Club, his years of office, did much to mellow him, to make him more approachable, while his knowledge and experience were always at the service of young mountaineers. He was, above everything, absolutely accurate. He had a great sense of humour.

The Zermatt district he knew as did no other man. He possessed an extensive knowledge of the Mont Blanc chain and of the Dolomites. He had helped make history for nearly fifty years, and there is scarce a man now living whose knowledge of practical and historical mountaineering equals his.

I made his acquaintance in 1881, at the old rooms in St. Martin's Place, but owing to absence abroad I saw little of him until fifteen years ago. Our tastes and the common tie of the Club then threw us much together. He was one of those absolutely loyal friends—you could ask his opinion and he would take the trouble to think the matter out, and would advise you, wisely and well, quite regardless of any prepossession he could quite well see you held. I recall *tête-à-tête* dinners at 8, and I would turn out at 2 A.M., having talked Alps and kindred subjects and people all the time in that care-free, open-guard way that is the symptom of great friendship.

I was outward-bound to Africa last winter. We had not seen eye to eye over an incident in the Club. I went to say good-bye—we discussed the matter. I took nothing back. He listened and said next to nothing. He did not give way easily either. Then I turned to go. He followed me, ailing as he was, down the stairs, and as I said good-bye there came into his face a look that told me all was well between us. On my return six months later, I went straight from the station to see him. He was no better. Two months later he sent me a message to say he was knocked over by the heat. Next day his man rang through to tell me of his death. The Club loses one of its most devoted sons—the craft a distinguished exponent—I, him. J. P. F.

THE LATE LORD STERNDALE, MASTER OF THE ROLLS

LORD STERNDALE was a member of the Alpine Club for nearly thirty years and during most of that time spent his summer holidays in the Alps. Some account of his climbs

and of him, as a climber, will probably be welcome to readers of the ALPINE JOURNAL.

It was in 1890 that he first took to climbing. He and I began going abroad together in 1887, and from that year till 1892, with the exception of 1889 when I was at sea, we took our long vacation holidays every year somewhere in the Alps. At first they were of the usual tourist kind and not confined to mountain tramps. In 1888 we heard Parsifal at Bayreuth and the Meistersingers at Munich; we went to the Passion Play at Oberammergau in 1890; we looked at pictures in Amsterdam and Dresden and Venice, but down to 1890 most of our time was spent in walking across the Tyrol and the Engadine by the mule passes or in the Valais and Central Switzerland below the snow line. He was always the best of companions as he was the best of friends.

Pickford—I cannot otherwise speak of him—was at first as much disposed as a tolerant and broad-minded temperament would permit to pooh-pooh the climbing of peaks and, when I rather hankered after ‘doing’ something or other, he inclined to hint that it was not worth while. In 1889, however, I do not know with whom, he went up one of the peaks in the Valais, I think the Allalinhorn, and I found him at Saas Fee in 1890 more than willing to climb, for he had been much taken with his experience of the year before. Accordingly, with Xavier Imseng, we went up two or three peaks, of which the Ulrichshorn was one and the Alphubel another. From that time onward Pickford was a convinced and a determined climber. Next year, with Blumenthal and Peter Ruppen as guides, and in company with R. and C. Arkle, we had quite a long though an unambitious season, first at Saas im Grund and afterwards at Arolla. The number of climbs we made was respectable, though as beginners we prudently chose, or had chosen for us, things suitable to our inexperience. However, among the rest we did the Dom and the Aiguille de la Za by the Western face. In 1892 I joined him at Zermatt, when he had already done Castor, the Wellenkuppe and the Rothhorn, and we did the Ober Gabelhorn, the Rimpfischhorn, the Matterhorn and the Weisshorn. On the day we did the Matterhorn the mountain was busy, for, in addition to R. and C. Arkle, Sir Edward Davidson climbed the peak from Zermatt and Sir Claud Schuster traversed it to Breuil. I recollect also two young gentlemen from the United States in white flannel trousers and, I think, in walking shoes, who were ascending their first peak. I doubt if they reached the top, but at any rate they safely returned to the bottom.

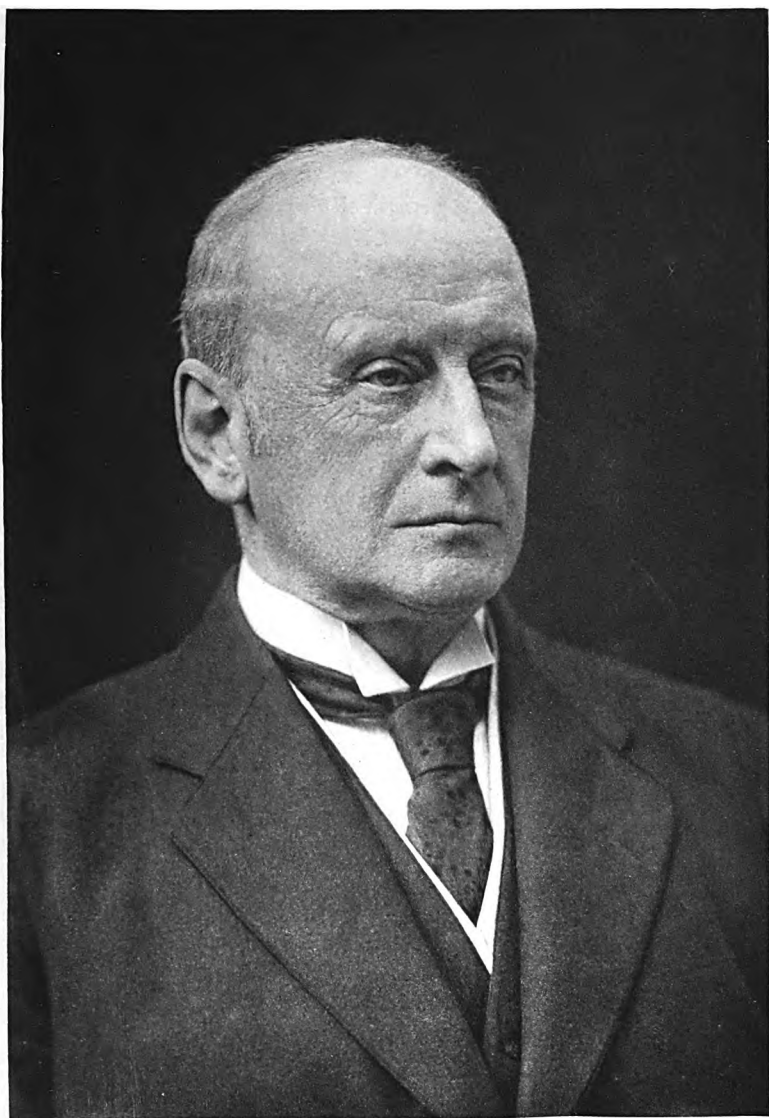


Photo J. Russell & Sons.

The Rt. Hon. Lord Sterndale.

From this year Pickford climbed steadily every season until 1904, generally with R. and C. Arkle and always with Alois and Roman Anthamatten. As I ceased to climb after 1892 I cannot speak personally of his achievements. In 1894 he was at Montanvert and Cogne and climbed among other mountains the Grandes Jorasses, the Aiguilles des Charmoz, the Grivola and the Grand Paradis. He was in the Tyrol and the Dolomites next year and climbed the Ortler, the Fünffinger-spitz and the Croda da Lago. In 1895 he did a considerable number of peaks in the Maderanerthal district. Then he returned to the Valais for the next six years, more often in the Saas valley than anywhere else. Among the many climbs recorded during this time are the Südlenzspitz, with descent on the Saas side, in 1897, the Breithorn from the N. side, the Riffelhorn by the Matterhorn Couloir, the Lyskamm, and the Dent Blanche (1898). From this time, often in consequence of bad weather, his seasons' results were less noticeable, but in 1903 he did the Petits Charmoz, and in 1904 Mont Dolent. I believe that at sometime he climbed the Grépon, but I do not know when, and it is not in the list of his climbs, with which his family have kindly supplied me, so I may be mistaken. In 1905 he did nothing, though he was in Switzerland. His last peak was Mont Blanc from the Tête Rousse in 1906, accomplished with much pluck and good humour, though he suffered acutely in the descent, from the effects of an injury to his knee, which put further serious climbing out of the question. He continued to go to Switzerland for many years afterwards, and was President of the Alpine Club 1914-1916, but his Presidency fell during the War when the Club's activities were necessarily restricted.

His was a long and very full record of hard climbing, and he loved the work and the mountains. He did not belong to the heroic age of pioneers, and virgin peaks did not come his way. He attempted no guideless climbs, and was content with the leadership of the competent guides, to whom he was much attached. So far as I know, he never had an accident or even an adventure. His good sense told him that to encounter avoidable risks is not much credit to anybody.

Of his technique as a climber I am not competent to judge. I was only with him in his first three seasons, and my own experience never qualified me to criticise others. It might have been thought that he would be clumsy on rocks and unsteady on ice, but in fact he was neither. He stood over six feet, was massively built, and probably on a climb weighed fourteen stone or more, but he was perfectly steady and solidly

planted, and on rocks he was not slow. He would not be hurried ; he was very independent in negotiating an awkward place, and, though his build made him look a little unhandy, he was from the first very workmanlike. I never remember him sending down stones, though I wish I could forget my own. His endurance was very great. I only saw him tired once, at the end of a punishing day from Saas im Grund over the Mischabeljoch to Zermatt with much soft, deep snow on the Saas side of the Col, which obliged us to force the pace coming down in order to get off the glacier before dark.

There are probably many members of the Alpine Club who have seen him climbing, and can say what he was like in later years, but from what I can learn he was to the end the same imperturbable, firm and steady climber, always trustworthy in the part he was to play, always simple and content to be guided by anyone, whose experience and skill were greater than his own.

It is to be remembered that Pickford never climbed a peak till he was over forty years of age ; that he continued to climb till he was fifty-eight ; and that his life at home was the sedentary life of a lawyer, and the toilsome life of a lawyer with a great practice. As far as he could he always kept himself in hard exercise. When he lived in Liverpool he used to run with the beagles in Cheshire. He cycled a great deal, and at King-Sterndale his favourite exercise to the end was a long tramp. Nothing but his extraordinarily perfect physique and a constitutional strength, which seemed proof against weakness, could have enabled him at his age to stand up successfully to the work of sixteen consecutive seasons of steady climbing.

This is not the place to speak of his great qualities as a lawyer, an advocate and a judge, of his rapidity of apprehension, his unerring memory, and the instinctive rightness of his conclusions. He passed from one judicial office to another by a kind of inevitable progression. Owing nothing to favour, nothing to politics, and nothing to advertisement, by the plain titles of worth and efficiency he attained to posts of the highest eminence and responsibility, and filled them in a manner that distinguished him even among his many distinguished predecessors. His legitimate ambition was gratified by these promotions, but twice at least in his later years they were undertaken chiefly at the call of public duty. If they had fallen to other men, he would have seen them pass him by without a thought of jealousy or even a feeling of disappointment.

On the Circuit which he led so long, he was the unquestioned arbiter of all questions of difficulty ; the kindly friend of the young and the equal companion of all ; in a word ' the Circuit's big brother.' On the Bench he was a tower of strength to his colleagues. No one ever differed from him in opinion without a qualm. His private kindnesses and charities were many, though known to few. If he had enemies—for there are some whose enmity is their form of homage and admiration—his unaffected simplicity was unconscious of them, and his forgiveness was to be had for the asking.

He died in his sleep at the age of seventy-five, still in harness, still in the prime of life. *Multis ille bonis flebilis occidit.* I have known no man who has left among his friends such a sense of irreparable loss.

SUMNER.

THOMAS MIDDLEMORE.¹

1842–1923.

On May 16, 1923, Thomas Middlemore, of Hawkesley and Melsetter, died of pneumonia after a week's illness at his Orkney home in his 82nd year.

He was born of an old Worcestershire family at Edgbaston on February 11, 1842, and educated at the Proprietary School there and in Paris. After a few years in his father's office he undertook the management of the family business of which he eventually became the owner. In October 1881 he married Theodosia Anderson Mackay, of Kinlochbervie in Sutherland, who survives him. He retired from business in 1896 and two years later purchased the Melsetter Estate in Orkney (comprising the islands of Hoy, Walls, Fara and Rysa) where he built himself a beautiful home. He was a J.P. for the counties of Orkney and of Worcester.

Thomas Middlemore always lived strenuously. Throughout his life he never relaxed his efforts to keep fit and to work. In his younger days though expending great energy on his business he yet found time to graduate as B.A. at the University of London and to follow whole-heartedly such recreations as hunting, boxing, and mountaineering. He also held a commission for some years in the Warwickshire Rifle Volunteers.

During his last 25 years he devoted himself chiefly to his Melsetter estate—constructing roads and building piers for the welfare of the islanders, and making successful experiments in agriculture. Moreover he was a keen sportsman and with his many guests greatly enjoyed the excellent shooting and fishing on the estate.

¹ A portrait appeared in *A.J.* xxxii. opp. 100.

Early in the War he made Melsetter open house to the officers of the Grand Fleet stationed at Scapa Flow : and he and his charming wife welcomed hundreds of officers for refreshment and rest during the four great years, so that an Admiral on hearing of his death wrote : ' Those who served in the Fleet in those waters now mourn for a real friend, whose hospitality was unbounded.'

To the end of his life he was erect and tall, strong and strikingly handsome. He spent his last winter at St. Ives in Cornwall, and there, years notwithstanding, he would play his daily round of golf with all his old perseverance and enthusiasm.

Vigour, continuity of purpose and chivalry were among the characteristics of Thomas Middlemore : and those who knew him best were well aware that the family motto—' Mon désiré loyalté '—was his life-long inspiration.

A. M. B.

Mr. Middlemore's Alpine career seems to me to deserve a special mention. He was elected to the Club on December 12, 1871, on the qualification :

Mont Blanc (from Col du Midi), G^des Jorasses, Monte Rosa, Strahlhorn, Lyskamm, Jungfrau, Aletschhorn, Col du Géant, and other passes.

For the next five years there was no more strenuous climber in the Club.

In 1872, between July 4 and 26, he traversed Grand Combin, ascended Dom, traversed Matterhorn from a gîte on Swiss side to Breuil, returning next day by the Furgg, traversed Gabelhorn from Zermatt to Zinal. On the Matterhorn traverse he was accompanied by the late Mr. Gardiner, the guides being J.-J. Maquignaz, Hans Jaun, and Peter Knubel. The party (with the addition of S. Middlemore) is seen in the portrait, 'A.J.' xxxii. opp. 100.

In 1873 he ascended Eiger, Mönch, Aletschhorn ('A.J.' vi. 298, the route is not clear, but according to Jaun's 'Führerbuch,' p. 36, it was 'from the N. side—for the first time—' and accordingly anticipates the ascent of 1883), crossed Jungfrauoch, *descending* to Wengernalp, ascended Schreckhorn, traversed Rothhorn from Zermatt to Zinal, ascended Schallhorn from Moming pass (first ascent, 'A.J.' vi. 294 *seq.* and xxxiv. 113), traversed Mont Blanc by Kennedy's route from high gîte on S. side to Chamonix, and finally, with Leslie Stephen, made an attempt on the Charmoz—'beaten back by the last bit consisting of a slice of rock.' It is difficult to say how far they got. Guides were probably Hans Jaun and Chr. Lauener. Such an attempt at that period denoted a high degree of enterprise and skill.

In 1874 he was in the Mont Blanc group, made an attempt on the Verte—frustrated by bad snow and a storm. At that time and for years after the Verte was looked on as a very formidable affair. It was left to the Oberland guides—the Valais guides at that time

were little known—no guide in Chamonix being willing to go. On the descent the party, wet through, was benighted on a ledge at 11,500 ft.

The Col du Géant was crossed to Courmayeur, and then with T. S. Kennedy and the guides Johann Fischer, Hans Jaun, and possibly Ulrich Almer (see portraits, 'A.J.' xxxii. opp. 233) an attempt was made to ascend Mont Blanc from the Brouillard Glacier. The point aimed at was the Col now named Emile Rey. A soaking storm defeated the project and the party was benighted on a ledge of rocks. A fortnight later J. Garth Marshall and Fischer were killed in repeating the attempt.

The weather that year was abominable. From a gîte at the top of the pastures Mr. Middlemore, with Jaun and Joseph Rey, crossed the Col des Grandes Jorasses.² His description of the climb provoked a storm, such as we have not witnessed in our time, and which can only be accounted for by assuming that the critics failed to read Middlemore's narrative with care. The climb was new, and naturally the rocks carried a good deal of loose stuff. Some of this got knocked down by the climbers and carried away two axes which had been perched instead of slung as they ought to have been. Middlemore's temperate reply brought his critics back to their bearings. The Col has been crossed several times since, and there appears no reason to consider it dangerous. The present-day view of the episode has been well summed up by a very competent judge, Raymond Bicknell, in his paper on the Col, in 'A.J.' xxxiii. 375.

In 1875³ we find Middlemore making an attempt on the Meije, then unclimbed. The note in his diary reads: 'From Gîte ascended to a point E. of the middle peak of the Meije, but found the mountain impracticable from bad state of snow.' From this one can almost assume that the intention was to try the 'arêtes' which at that time was considered the most likely line—i.e. along the arête from the Pic Central. Jaun's 'Führerbuch' throws no light, but the attempt shows what sort of traveller Middlemore was. Bad weather drove them to Courmayeur, where 'from a gîte on Brenva Glacier ascended Flambeaux, and from the arête descended the N. face (very steep ice-covered rocks, 3 hours), and joined Col du Géant route just above the séracs.' A fresh attempt on the Verte was frustrated by the dangerous state of the snow.

The next entry is very interesting, for had it been successful it would have forestalled H. Cordier, who, led by Jakob Anderegg, made, the next year, the first complete ascent of the Finsteraarhorn by the S.E. arête. The party slept at the Rothloch⁴ on the

² *A.J.* vii. 104, 225 and other references.

³ There is no entry in Jaun's book, although he was leading guide.

⁴ See *A.J.* xxx. 356. No photograph has yet reached me!

Fiescher Glacier on July 30. Next day: 'Left Gîte 2.55 A.M. Got to rocks below last Joch at 5.50. Breakfasted. Col, 7.45. Arête very long and difficult. Reached final arête 12.0. Found no passage up final peak, so descended and crossed Grünhornlücke to Faulberg in storm, 7 P.M. August 1, left Faulberg 8.30; Mönchjoch 1 P.M.; Grindelwald 5.35. August 2, left hotel 2 P.M.; Kastenstein 7 P.M. August 3, started 3.30 A.M.; Finsteraarjoch 6.30-7.15; Agassizjoch 9.15; Hugisattel 11; summit of Finsteraarhorn 12.30. Failed to get down through gulley being choked by ice and snow. Jaun reports 150 ft. of rope wanted. Descended by Fiesch glacier and reached Fiesch 10 P.M.'

This extract shows that the party climbed along the S.E. arête of the Finsteraarhorn and got close under the summit, as far as the slab where a rope is fixed. This slab gave Jakob Anderegg great trouble when this ascent was first completed the following year. In 1883 it was all iced and gave my party a lot of work. One must assume that on Middlemore's attempt the conditions were even worse, and the slab possibly buried in hard snow or ice. This slab is only about 10 minutes from the summit. Foiled on the ascent, the party proceeded to climb the mountain by the ordinary route, with a view of *descending* to the highest point on the S.E. arête, reached by them three days earlier, but as stated did not succeed in this.

It was a misfortune to have failed so close to the goal. Yet there are still authorities who, without personal knowledge of the ground, are content to assert that Meyer's three men in 1812 succeeded in scarce better conditions where, sixty-three years later, a man like Jaun, then in his best years, and with great experience of difficult ascents, a master of the craft, failed!

We now come to 1876, his last year of serious mountaineering. His great climb is the ascent, on July 31, of his old enemy the Verte. He obtained complete satisfaction by making the first ascent from the Argentièrre Glacier. It was his first expedition of the year, as he went straight to Lognan directly he reached Chamonix—such was the heart and condition of the man.

The party consisted of Oakley Maund, H. Cordier, and himself, with the guides, Hans Jaun, Jakob Anderegg, and Kaspar Maurer.

The climb was fully described by Maund in 'A.J.' viii. 289 *seq.* Middlemore says: 'If we imagine three Mornings interspersed with rock work on a par with the best bits of the Gabelhorn, we get a fair notion of the treat that kind heaven vouchsafed us.' Although this description does not, nowadays, indicate any great difficulty, the expedition is both long and arduous, and, moreover, even when you get to the summit you are by no means out of the wood. Jossi once told Sidney Spencer he would cut right up the couloir for a thousand francs; and knowing a good deal of that mighty, if occasionally casual, mountaineer's performances, I am certain he would!

The ascent has not been repeated, an attempt by Lord Wentworth's party, probably with the Laueners, having failed.

On August 4 the same party made the first ascent of the Courtes from the Argentière side. Times were : Lognan, 1.45 A.M. ; summit, 12.30 ; Jardin, 6 P.M. ; Chamonix, 10.30 P.M.

On August 7, they made the first ascent of the higher Droites—'left Pierre à Béranger, 2 A.M. ; Jardin, 9.30 ; summit, 11.45 ; Jardin, 6 P.M.' On the descent they were much endangered by stones. The incident is vividly described by Maund.

Middlemore and Cordier, with Jaun and K. Maurer, then moved to Pontresina, and on August 12 made an attempt on Piz Bernina by the Scharte arête. They, however, stopped short on Pizzo Bianco, making its first ascent, as, strange to say, the two guides reported the Scharte 'ganz unmöglich.'

Six days later the same party made the first ascent of Piz Roseg from the Tschierva Glacier, descending to the Sella Glacier, a strenuous ice expedition. These expeditions are described in 'A.J.' viii. 109 and 198 *seq.*

This practically ended his high-climbing career, though in 1878 he visited the Graians and Pontresina and was chamois shooting in the Engadine in 1876 and in the Engadine and Graians in 1878.

The career, if meteoric, is very remarkable, as it covers little else than first-rate climbs, made under very different conditions from nowadays. He often bivouacked, sleeping seldom in a hut, and never spared himself.

Between him and Jaun existed a great affection and respect.

Among his friends were Wm. and C. E. Mathews, Gardiner, Cordier, Maund, Lord Wentworth, T. S. Kennedy, Eccles, and Loppé.

This note would be incomplete without a reference to his writings. He had an incisive and interesting style well exhibited in his papers in volumes vii. and viii. of the 'A.J.,' but his great Alpine Paper is his appreciation of Jaun in 'Pioneers of the Alps.' There is no greater tribute in that book of great tributes.

J. P. F.

WILLIAM PATON KER.

1855-1923.

THE death of W. P. Ker, Professor of Poetry in the University of Oxford, meant a loss to learning and literature, and to a very wide circle of friends ; and it was not to be expected that obituary notices of so eminent a man should contain much reference to the 'Alpine' side of his life. Yet his love of mountains was a most intimate part of his personality. It coloured his thought at all times and in all places : the Alpine Club never elected a worthier member, nor one

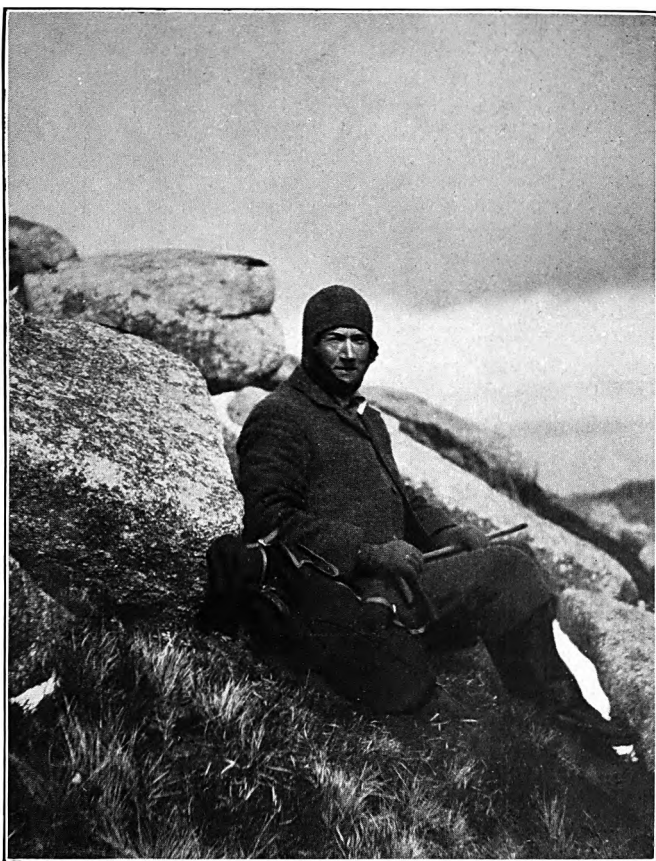
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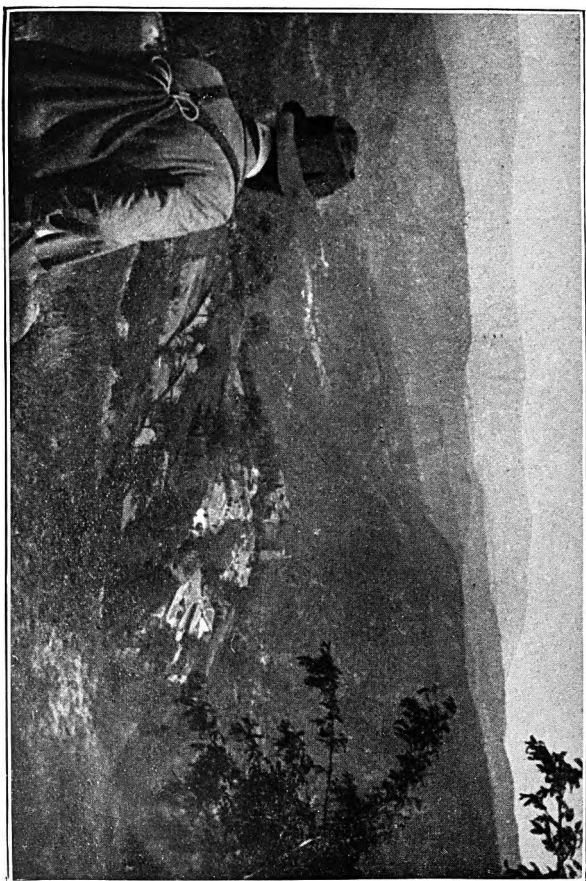
who was in a truer sense a mountaineer. He joined it in 1908. He had had three consecutive seasons in the Alps, and was then 52 ; he had begun climbing above the snow-line with a zeal usually associated with youth rather than middle age ; in the years between 1906 and 1914 he was annually in the high mountains, and made a good many of the ordinary ascents in the Valais and the Graians, for the most part in the company of his friend Professor C. M. Thompson. He had four more fairly active seasons after the war.

Ker came too late in life to the Alps to be ever a perfect master of mountaineering technique. But he was a man of great physical strength, and indomitable courage and perseverance ; many walks and climbs among Scottish and English hills, in the years which he confessed to have been unregenerate, had inured him to hardship. Not many expeditions tired him. If they did, as occasionally happened when he was well on the way to three-score and ten, he had a wonderful power of recuperation ; he might be quite done up in the evening after a long and severe climb, but next morning he would have got over it and be as fresh as a young man. In 1921, being then 65 years of age, he crossed the Trifhorn from Zermatt to the Mountet, and returned two days after over the Rothhorn ; rested for a day or so at Zermatt, then crossed the Matterhorn to the Italian hut ; came back next day over the Furggenjoch to the Schwarzsee, had a night's rest, then climbed either Castor or Pollux—I forget which—and returned to Zermatt with no appearance of excessive fatigue, after an outing which might have tried the strength of a man in the prime of life. After that, it could not be expected that bad weather would prevent him from climbing the Finsteraarhorn, in 1922 ; nor did it.

Not for feats like these, remarkable enough as they were for an elderly man, will W. P. Ker be remembered ; rather for that rare and singular temper which made him an ideal partner in any mountain expedition. That is what he was, for friends of all ages, but especially (I think) for men and women much younger than himself. He took a particular pleasure in their company, and they in his. They, and others, will long remember the peculiar intensity of enthusiasm which possessed him when he was walking or climbing among the High Alps. It was not generally (as his friends will readily understand) expressed in many words, and sometimes not in words at all ; but it was there, burning in him like a fire, and somehow communicating itself to others. He was enjoying every moment. He idealised mountains ; nothing in the whole business of mountaineering but seemed in a manner to him to have a kind of divine sanction ; and the peasants who guided him ceased to be ordinary men, and became creatures divinely appointed to lead him into sacred places. Somehow in the Alps he seemed to be raised to a higher power. Merely to be on a climb or a high walk in noble scenery quickened his senses and his intellect. The Alps satisfied him, as great literature satis-



WILLIAM PATON KER.



WILLIAM PATON KER.

fied him. They brought out what was best in him ; and the best of W. P. Ker was pretty good.

He lies buried in the old churchyard of Macugnaga. That valley was the best loved of all his Alpine resorts ; and its Holy of Holies, to him, was the Pizzo Bianco, on which he died : ' this is my mountain,' he is reported to have said, only a little while before he sank down unconscious upon it. Some details of his last expedition have been described in a little account written by two ladies who were of his party, from which I am permitted to quote. ' We put out the lantern,' they say, ' at Alpe Rosareccia ; it was a most beautiful clear morning, and as we came into the corrie above the Alpe, where the stream runs shallow through grass and one can look out on the ring of Monte Rosa and see all the hills of Val Anzasca, he said, " I thought this was the most beautiful spot in the world, and now I know it." ' He had been, they say, ' very strong and happy that day.' After his death, ' as the guides were helping us down the rock, one of them said : " The soldier dies on the field and the sailor on the sea, and the mountaineer loves to die on the hills." ' It is what he would have loved to hear.'

A. D. G.

SIR HENRY HAYDEN

1869-1923

It was not until 1919 that Hayden and I became intimate. He was then Director of the Geological Survey, and I was dealing with mines and minerals as Deputy Secretary in the Commerce Department of the Government of India. We worked together during the strenuous days of post-war dislocation, of control and de-control ; and we spent our brief leisure together, walking and shooting in the Simla hills. We were from the first attracted to one another by our common love of the Himalaya, and I had no greater friend.

Hayden left India in the summer of 1920, and went home by South Africa and the Belgian Congo. We met again in London in the summer of 1921 for our long-planned visit to the Alps. It was Hayden's first visit to the Alps, and he put himself in my hands to show him what was best. We foregathered at Pralognan on July 6, and for five glorious weeks we wandered where we willed. With a couple of local men to carry our sacks, we walked over the hills from Pralognan to Val d'Isère, and thence to the little inn at Pont, at the head of the Val Savaranche. We climbed the Grand Paradis, and then crossed the Col du Grand Neiron and the Col de l'Herbetet to Cogne. From there we climbed the Grivola, and chartered the Aosta autobus to carry us the same evening to Courmayeur. At Courmayeur, on the recommendation of Henri

Brocherel, we engaged as guide César Cosson, with whom Hayden soon formed a close friendship.

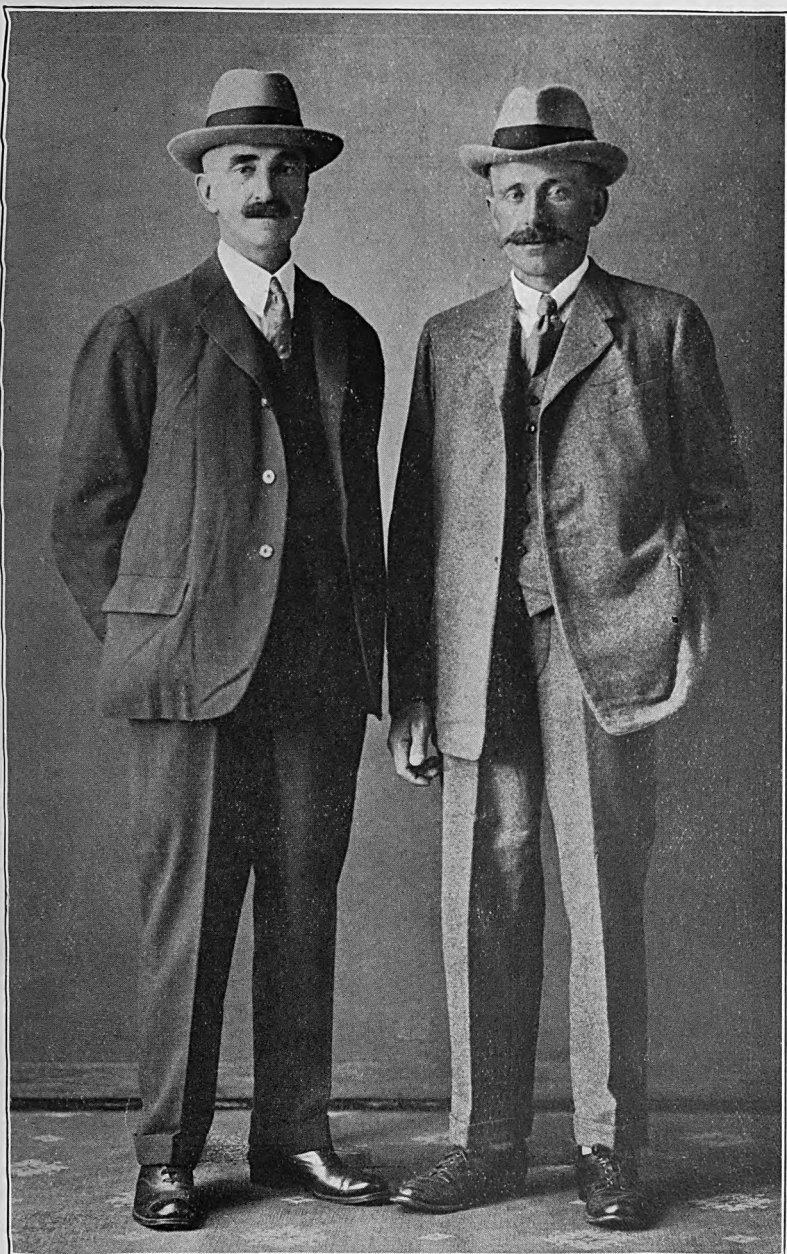
A break in the weather diverted us from the Dôme hut, and we walked over the Col de la Seigne to Mottets. From there we crossed the Col des Glaciers to Trélatête, descended in heavy rain to Contamines, and reached Chamonix next day by train. We sat together, I remember, late that night watching the full moon rise behind the Aiguilles. A clear dawn afterwards sent us up to the Grands Mulets. The weather, however, was still unsettled, and our attempt on Mont Blanc ended in a blizzard at the Vallot Refuge. We descended again to the Grands Mulets, reached Montanvert by Pierre à l'Echelle and the Glacier des Pèlerins the same night, and returned to Courmayeur by the Col du Géant.

Our next journey was reminiscent of Himalayan travel. Collecting my family, two ladies and a boy of seven, we put them and their baggage on half a dozen mules, and marched over the Col Ferret into Switzerland. It was a merry day, and a merry evening afterwards. There were five of us, Cosson, and young David Revel, the son of the Guide-Chef at Courmayeur, whom we had engaged as porter, and six roystering Italian muleteers. We inundated the little inn at Ferret, and overflowed into the barns.

Hayden, Cosson and Revel left early next morning and crossed the Col de la Grande Luis to the Saleinaz Cabane. The muleteers returned to Italy. I drove down the valley with the family to Champex, and left again at midnight to rejoin Hayden the following morning on the top of the Portalet. We slept at the Dupuis Cabane, ascended the Aiguille du Tour and crossed the Fenêtre de Saleinaz to the Saleinaz Cabane. Next day we climbed the Aiguille d'Argentière, returned by the Col du Chardonnet to Praz de Fort, and reached Champex on the following morning. So ended July.

One day's halt at Champex, and then by Sembrancher and the Val de Bagnes to Chanrion. In cloud and mist we crossed the Col d'Oren to Prarayé. The inn, as usual, was closed. But we slept comfortably in a barn and, after a night of heavy rain, walked over the Col de Valcournera on a sparkling morning to Breuil. Thence to the hut at the Great Tower, and over the Matterhorn on a perfect day to Staffalp. A hot trudge through soft snow across the Col d'Hérens and the Col de Bertol brought us to Arolla. The next day we went by the Col de Seilon to the Val de Bagnes, and so back to Champex. There we parted, on August 10.

In the autumn Hayden returned to India. We had agreed, if all were well, to meet at Cuneo on June 1, 1922, and march through the Maritime and Cottian Alps, Dauphiné, and the Graian Alps, following as far as possible the watershed, to Courmayeur. While in India, however, Hayden was invited to examine the mineral deposits of Tibet. Accompanied by Cosson, he spent the summer of 1922 in Lhasa and Tibet. Their experiences are recorded in a book which is being published in French. Hayden returned to



SIR H. H. HAYDEN.

CÉSAR COSSON.

Taken at Darjeeling
on their return from Thibet
in 1922.

England at the end of the year, and in January our Courmayeur party once more dined together at the Oriental Club, the night before I left for India.

During the spring Hayden was busy with his book on Tibet. He was more than once at Courmayeur for discussions with Cosson, from whose diaries the book was partly compiled. He stayed at Cosson's farm, enjoying to the full the simple alpine life. In the early summer, again accompanied by Cosson, he was fishing in the Italian valleys of Monte Rosa. In August they went to the Oberland, and there they died.

Hayden was, first of all, a great mountain traveller. His knowledge of the Himalaya and of Himalayan travel was unrivalled. He was fond enough of a climb for its own sake, but it would never have interested him to stay in one centre merely to climb. A peak was a stage in a journey. He climbed to the top in order to go down the other side. He went through the Alps as though he were marching through the Himalaya, taking everything in his stride. He was a fast and tireless walker, and at fifty odd years he was always in hard condition. With his ice-axe across his shoulders, and his geological hammer dangling from his fingers, he would stride in at the end of the longest day, apparently as fresh as when he started.

Hayden was a great shikari, and the game on the mountains was almost as interesting to him as the mountains themselves. In the Alps he was always on the look out for game and, with his keen and trained sight, he saw more in a season than many see in a lifetime. His love of shikar was shared by Cosson, who was a notable chasseur in his own valley, and they collected some fine trophies during their travels in Tibet.

In his work Hayden combined, to a remarkable degree, devotion to pure science and shrewd business sense. His opinion on all matters relating to mining, whether minerals, metals or oil, was eagerly sought by the commercial world. During the war he did high public service in mobilising and developing the mineral resources of India. He was in the Hindu Kush and the Pamirs during the summer of 1914, and the outbreak of war found him at Kashgar. He hurried home, across Turkestan and Russia, to join the Army, but he was at once sent back to India, to do there the work for which he was supremely competent. His heart, however, was always in the firing line, and it fretted his gallant spirit that he was not permitted the honour of active service.

But it is as a man that we, who knew him, shall most remember and most miss him. He had the compelling charm of chivalrous simplicity. 'To be honest, to be kind—to earn a little and to spend a little less': it might have been his rule of life.

G. L. C.

Sir HENRY HAYDEN was proposed for the Club by Mr. Freshfield, seconded by Professor Garwood, on the qualification :

- 1898. 7 months in Spiti Himalaya.
- 1899. 8 " " "
- 1901. 8 " " " and Ladakh.
- 1903-4. 1 year in Sikkim, Himalaya, and Tibet.
- 1905. 3 months in Hindu Kush in Hunza, Nagar and Gilgit.
- 1907. 3 " " " Afghanistan.
- 1914. 4½ " " " Chitral and Hunza and
Great Pamir Range (Russian Pamirs) and Alai
Mountains.
- 1921. Grand Paradis, Grivola, Mt. Blanc (but only to Vallot
Hut owing to weather), Aig. du Tour, Aig. d'Argentière,
Matterhorn traverse from Italian side.
Cols de la Vanoise, Galise, Nivolet, Neiron, Herbetet,
Seigne, des Glaciers, du Géant, Gde Luis, des Plines,
Fenêtre de Saleinaz, du Chardonnet, d'Oren, Val-
cournera, d'Hérens, Bertol, Pas de Chèvres, Seilon.

In 1923 he and Cosson had ascended Diablerets, Wildhorn, Wildstrubel, Jungfrau from Rottal.

Mr. R. S. Strachey, lately of the Indian Service, and a close friend of Sir Henry Hayden, has been at great pains to obtain information as to the accident. It bears out Mr. Gurtner's account. Mr. Strachey adds: 'The toughest job Hayden ever did was probably his journey from India over the Pamirs and, I think, Chinese, and certainly Russian Turkestan, alone (except for porters), arriving at the Russian outposts to hear that the Great War had just started.

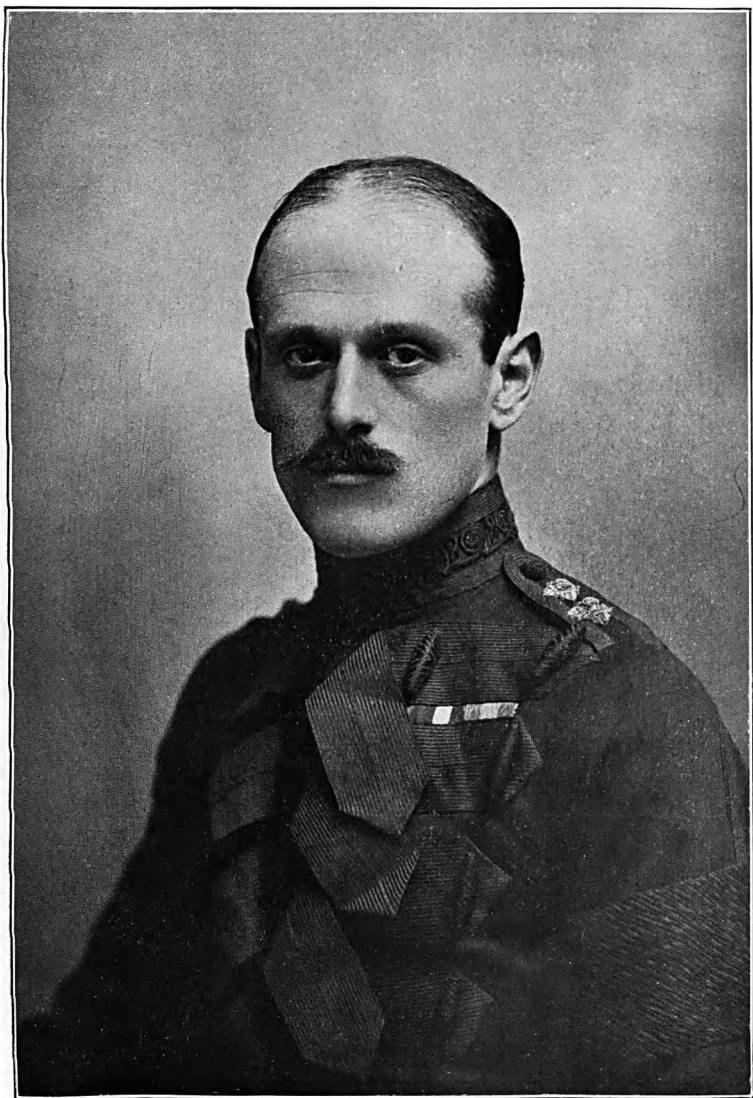
LIEUT.-COLONEL LAWRIE C. F. OPPENHEIM, C.M.G.

1871-1923.

THE British Army has lost one of its most distinguished soldiers, and the Alpine Club a very keen and most capable mountaineer.

Lawrie was educated at Harrow at Mr. Bowen's House. During the holidays Mr. Bowen used to take him for walking tours in the Alps, and the influence of his old House Master, for whom Lawrie had the greatest respect and affection, was present throughout his life. After leaving Harrow, Lawrie went up to Trinity College, Cambridge, where he took Honours in History.

His was indeed in many ways a most interesting and adventurous career. In one capacity or another he had seen far more active service than falls to the lot of the ordinary individual soldier, and no one was better fitted by nature and temperament to appreciate the difficulties of a campaign, the capabilities of a leader, or the mentality of an enemy. He had the crowning gift of imagination.



LT.-COLONEL L. C. F. OPPENHEIM, C.M.G.

His career did not at first appear as fated to be that of a soldier ; his tastes seemed to be more of a literary nature. In 1897, however, his opportunity came, and he joined the Tirah Field Force as an accredited war correspondent. He served throughout that arduous and nerve-racking campaign, meeting on several occasions Captain Charles Bruce, then commanding the Gurkha Scouts of the Force. Attached to the Northamptonshire Regiment (48th), Lawrie was present at Dargai and all the principal engagements. He returned from India in time to join the Nile Expedition, then in the final stages of the advance to Khartum, and was present at the decisive battle of Omdurman. Of that picturesque struggle between the fanatical survivors of barbarism and ourselves he has often described, in articles and conversation, some of the most striking episodes. He stood in front of the line at the moment of Macdonald's famous change of front, and has often mentioned the dramatic moment when the Egyptian battalion immediately behind him first caught sight of the rapidly advancing waves of Dervishes, and, without a sound, turned, broke, and was no more, and of the grinning, yelling lines of gallant Soudanese who rushed up to fill the gap in the front. For his services he received the two medals and clasp.

A year later, in October 1899, on the outbreak of the South African War, Lawrie hurried out to the Cape, still in the capacity of a War Correspondent. So black was the outlook on his arrival, that he at once enlisted as a trooper in Thorneycroft's Mounted Infantry. With that hard-bitten unit he took part in the Spion Kop fight, and for his gallantry in that desperate and much criticised engagement was promoted an officer. It was while serving in Thorneycroft's that Lawrie first met his great friend 'Jimmy' Shea, now a most distinguished Lieutenant General. On the break-up of Thorneycroft's, Lawrie was specially promoted Captain and transferred to the Scottish Horse. Later again he was given a Captain's Commission in the Queen's Bays (2nd Dragoon Guards), and with this distinguished cavalry regiment fought right through the latter stages, being present at the final defeat of Delarey, the last engagement of the war. He was awarded the two medals and nine clasps. Later, on the return of the regiment to England, Lawrie qualified for the Staff College. In 1911 he left the Bays and transferred in the same year to the 4th Bn. Highland Light Infantry (Special Reserve). Previous to this transfer he had been employed for five years at the War Office in writing the later volumes of the official history of the South African War. His work speaks for itself.

Soon after the outbreak of the European War, Lawrie was posted to the 2nd Bn. H.L.I. (74th), 5th Brigade, 2nd Division. With those grim Scotsmen he was present at the Aisne, the Race to the Sea, and the immortal first battle of Ypres. He witnessed the break through of the Guard Corps, when 4000 Prussians, apparently with nothing

between them and Calais, were counter-attacked by a single weak battalion of the 5th Brigade (2nd Oxford & Bucks L.I., 52nd), and driven back headlong across the front of the 74th, where they fell in swathes under the fire of endless 'mad minutes.' Lawrie often spoke of one incident as the most impressive sight he had ever seen—the attempted rallying of the broken, yet still splendid, Guards regiments to the beat of the drum, in full view and at point-blank range of his battalion, when even darkness could not still the slaughter and the Scots killed over 700 Germans by indirect rifle fire towards the sound of the drums. Two days later, Lawrie's regimental service ended abruptly. Severely wounded through the thigh by shrapnel, he was invalided home. On his discharge from hospital and rewarded by a Brevet Majority, he was appointed in 1915 Military Attaché at The Hague. It is quite safe to say that in this capacity he rendered services to the Entente which even now can hardly be sufficiently appreciated.¹ His work was unique; there is no record of the methods which, peculiarly his own, enabled him to solve the most obscure and baffling of problems. More cannot be said; war will always exist; discretion must be maintained. As an Intelligence Officer Lawrie had no superior, possibly no equal. A Brevet Lieutenant-Colonelcy, the C.M.G., and many Entente Orders rewarded his war services.² In 1920 he was transferred as Military Attaché to Berne, and subsequently, in 1922, as British Military Representative to the Permanent Advisory Commission of the League of Nations at Geneva.³ It is an open secret that he was destined for a much higher post.

Elected first to the Alpine Club in 1899, Lawrie subsequently resigned for a time, returning to us in 1911. Of his lengthy Alpine career it is sufficient to say that, I believe with the exception of Dauphiné, the Cottians and the Maritimes, Lawrie had climbed in every part of the Alps; he had also travelled and shot extensively in Kashmir. Most of his earlier climbs were accomplished with his brother-in-law,⁴ Gerald Arbuthnot, who fell in the European War, and the Jossi family. Later he climbed with different members of three generations of the Pollinger family, notably with 'young'

¹ I have before me a letter from the late D.M.I. addressed to his widow. It describes Lawrie's services as 'simply invaluable.' The letter goes on to add: 'He is one of those people that we cannot replace.'

² Among these decorations is the Dutch Order of Orange Nassau, a proof of the esteem in which he was held by a Neutral Government.

³ I have also been privileged to read the deeply appreciative official letter from Sir R. Graham, late British Minister at The Hague, to the War Office on Lawrie's departure. A recent letter from Admiral Jehenne of the League of Nations (French) Advisory Committee is equally flattering.

⁴ Lawrie was carrying Arbuthnot's ice-axe on the day of the accident.

Alois, who, except in the Dolomites, was usually his leader. It was a sad, if fitting, coincidence that the youngest member of that unique family should have been his companion on July 12, 1923. He had also climbed much without guides, especially in winter. Few Englishmen were better acquainted with mountaineering conditions at all seasons of the year.

As his companion on some eighty expeditions, summer and winter, I knew Lawrie's form well. Gifted with great strength and steadiness, he was an eminently safe companion. Indeed, his only fault was a too great confidence in his really remarkable powers of endurance. If necessary, he could move with great speed and sureness. As a skier, although not in the first flight as regards actual performance, he was one of the *very* few who could appreciate what can safely be attempted and what should be left alone. He was modesty itself, as a mountaineer, a soldier, or a friend. Lawrie's friendship was not lightly given, but once given was eternal. Loyalty and sincerity may indeed be described as the keynotes of his character. He leaves an ever blank space in the memories of all who knew him.

Lawrie married in 1908 Mary, daughter of the late Mr. Joseph Monteith of Carstairs. He leaves one young son.

To Lawrie's widow, to his mother, and to all his family, the Alpine Club offers its deepest sorrow and sympathy.

E. L. S.

NEW EXPEDITIONS.

Mont Blanc Group.

COL DES NANTILLONS¹ (3292 m. = 10,798 ft.). July 26, 1921.
MM. Tom de Lépiney and Jean Savard, G. H. M. of the *C.A.F.*

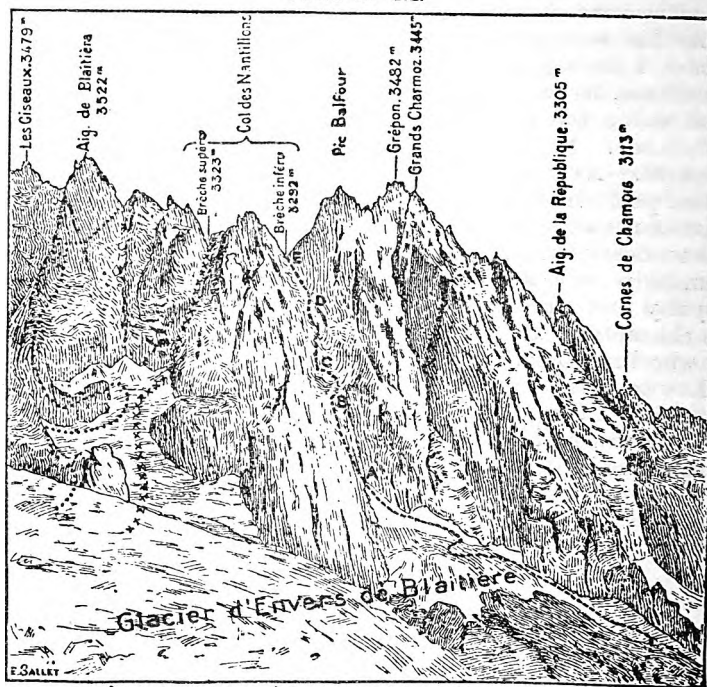
The party left Chamonix at 0.15, ascended the glacier d'Envers de Blaitière on its extreme right (ascending) along the rocks, thus reaching its highest point at the foot of the great couloir descending from the Col—i.e. the lower Col; then climbed a narrow, vertical chimney on the left of the couloir in a straight line until the broad platform is reached, whence the Knubel crack starts. This is either climbed or, preferably, traverse 20 m. to the right, and climb a great slab, turning on the right a rocky spur which dominates it. Then approach obliquely the couloir over easy slabs and vires, and finally climb it for the last 100 m., turning on the left the great final block. The sketch will make the matter clear. It remains, of course, to *climb it*! [Précis of full account in *La Revue Alpine*, xxii. 107-112.]

¹ Cf. 'Col des Nantillons,' by E. A. Broome, *A.J.* xxii. 353 seq.; and Mr. Young's note with route-marked sketch, *A.J.* xxv. 180.

See, under Various Expeditions, Mr. Geoffrey Young's remarks on this climb, and on its repetition by Mr. Bower's party.

AIGUILLES DE CHAMONIX

VUES DU S.E.



----- Itinéraire: DE LEPINEY-SAVARD AB: cheminée, -BC grande plaque; -CD: dalles
 x x x x x x x SEYMOUR-HOARE et vives, -DE: couloir
 E.A. BROOME

Pennines.

BREITHORN (Ost-Spitze P. 4089 = 13,372 ft.) FROM SCHWARTZTOR. August 17, 1923. Mr. E. G. Oliver, with Adolf and Alfred Aufdenblatten. Left Bétamps at 3 A.M. and crossed to foot of the Schwarze. Then up moraine to snow on Schalbetterfluh; thence in W. direction to foot of séracs on Schwarze Glacier (5.30). Top Schwarztor (8.20 to 8.30) through interesting séracs.

The end of E. arête of Breithorn meets the glacier somewhat below top of Schwarztor, and the climb from Schwarztor is a *face* climb. Attacked rocks from top of pass, and just to left of large chimney which descends almost from top of peak. Ascent followed line of this chimney, though outside it until near top. After three pitches crossed chimney and recrossed somewhat

higher, first few pitches difficult, then it became easier for a time, but difficulties recurred as got higher.

Reached top 12.15 (3½ hours for 346 meters from the Col.)

This is the most difficult rock climb which I have done in the Zermatt District. Rocks are firm and no risk of falling stones, but difficult pitches on slabs with little hold. Twice sent up the rucksacks on rope, taking time. Rocks should be dry as we found them.

Left top 12.25. Descent to Verra Glacier, thence over Breithorn Pass to Gandegg (17.00). Very bad snow.

OBER-GABELHORN (4073 m. = 13364 ft.) BY S. FACE. (A short variation.) August 29, 1923. Mr. E. G. Oliver, with Adolf and Alfred Aufdenblatten. Left Staffel Alp 1 A.M., reached top of moraine below Arben Glacier (5-5.30). Bare glacier required considerable step-cutting. Reached foot rocks S. face 7-7.30 and climbed straight up face keeping rather towards left—i.e. towards the Arben-grat. Bearing more to left reached place (10.00) below great Gendarme on Arben arête, from which steep climb of about 25 m. would lead to the arête immediately above great Gendarme. This was route followed by Mr. R. W. Lloyd's party in 1904. Straight above rose great couloir descending from Gabel, towards top of which is evidently an overhang. Determined to try direct ascent without touching Arben-grat and accordingly started (10.30) up very steep buttress on true left of couloir. After climbing three steep and difficult pitches over slabs, came right against bulge which continues across face. This afforded no loophole for attack so traversed to right underneath bulge until almost on the S.E. arête. Thence short distance up face led to an almost horizontal gallery by means of which traversed again to left until immediately below highest point. Thence up steep chimney to the snow a few steps below top (12.45).¹

As far as the point where we halted at 10.00 there had been no serious difficulties, but the last 2½ hours we found very difficult. The height made in the time cannot, I think, be more than 100 m. at most. The climb is very steep and exposed, over slabs affording little hold. Two pitches caused us particular trouble. The rocks, however, are very firm.

Left top 14.00. Top Wellenkuppe over great Gendarme 16.15. Trift moraine 18.00. Trift hotel 19.00. Much new snow on Wellenkuppe ridge, though S. face almost dry and in good condition.

¹ I discussed the climb with Josef Pollinger when I was in Zermatt and he remembered the place where Mr. R. W. Lloyd and he went up to the Arben-grat very well. He came to the conclusion that the couloir to the Gabel was unclimbable, but when they got to the top they descended on the spare rope from the Gabel, and rejoined the route by which they had ascended.

PICION EPICOUN (c. 3490 m. = 11,347 ft.), BY THE S.E. ARÊTE. September 5, 1923. Mr. I. A. Richards and Miss D. E. Pilley.— This peak, of which no ascent is recorded, is the highest point on the frontier ridge between the Bec d'Epicoun, A.S. 3527 m. (Becca Rayette C.I. 3520 m.) and the Grand Epicoun 3437 m. The name is found on the *Carte de l'Etat-Major Sarde*, 1841, but does not appear on any later map. The Picion (Petit) is considerably higher than the Grand Epicoun (see excellent photos in 'Boll. C.A.I. vol. xxxii. pp. 85, 88, and 'Rivista,' 1920, p. 126, where, however, Clapham's route is wrongly marked), but the name may indicate its relation to the higher Bec d'Epicoun, 3527 m.

The party left Chamin at 6.0 and mounted by the Combe de la Sasse and a rock and grass spur to the foot of the ridge. Here the rope was put on (10.10). The arête offers at first a broad steep face, best gained by mounting a water-worn gully on the right for some 100 ft. and then traversing to the left across its wall. Three long parallel chimneys, some 70 ft. apart cut the face. That on the left was followed until its final section; a movement to the right was then found preferable up strictly vertical rock with superb holds.

The crest of the ridge was soon gained over easier ground and followed by interesting climbing to a high grey gendarme (1.15). From this a singularly narrow edge was seen abutting upon a formidable red tower. The easiest way up the face of this is found by mounting first to the left and then crossing downwards to the right, when a concealed cleft is discovered, by which the shoulder of the tower was won with unexpected ease, but some rather difficult climbing was encountered before the crest of the arête was regained (3.20). It rises in three long, rounded steps to the summit (4.30). The rocks throughout the expedition are impeccably firm and well provided with holds. The climb is a long one; very little time was wasted and a much earlier start is advisable.

The descent, much hindered by thick mist, was made *via* the Bec 'Epicoun and its easy S.W. ridge to the crevassed Chardoney glacier and the Combe de Berrié. A better route would be by the couloir at the E. foot of the Mont du Cerf and the Combe de la Sasse.

Compare Kurz, 'Guide des Alpes Valaisannes' (1923), vol. i. pp. 186–90, for details of the other routes made in the neighbourhood and excellent sketches. Our ridge is that to the right of route 652, on sketch, p. 190.

Bernese Oberland

EBNEFLUH—MITTAGHORN ARÊTE (ca. 3720 m. = 12,202 ft.) FROM THE ROTTAL TO THE EBNEFLUH FIRN BY THE ROTEFLOH OR N.W. ARÊTE. August 18, 1922. MM. H. Lauper and Dr. O. Hug, A.A.C.B.

This fine arête, that has been staring climbers in the face these many years, has fallen at the first attack by the two enterprising

and competent mountaineers named above. It is, strictly speaking, not an ascent of any peak, but is a new Col.

The party left the Rottal hut at 4 A.M., and attained the crest of the Roteffuh arête at about 2900 m. at 5.30. They followed the easy arête, crossing at about 3200 m. the well-known limestone band which runs through the whole Jungfrau chain. Just above this they came on an empty bottle, left years ago by MM. Charles Montandon and F. Beck. After about an hour the arête became steeper and provided fine climbing. They were, however, able to keep mainly to the arête, being forced by a steep pitch into the left flank, where they had some cutting. The rocks were then interspersed with ice and snow, requiring care. On attaining a striking gendarme, which all along had served as a guide mark, they made a short halt. They turned this by a traverse in the



N. face. The next 50 or 60 m. were as difficult and exposed as could be desired, and short bad-hold pitches connected with very steep, hard snow. In this way, scraping rather than cutting steps, they gained a gap in the main arête. They now traversed about 20 m. horizontally to a deep gully which led them without difficulty to the watershed immediately left of the only gendarme between the summit of Ebnefluh and the Ebnefluhjoch.

The climbers thoroughly deserve their success. Mr. Lauper did, in the course of the same summer, the fourth ascent of the Bietschhorn by the S. face, and the ascent of the same mountain by the W. arête in winter. Particulars of these two climbs will appear in May 'A.J.,' and it is hoped that they will supply particulars of their ascents of last summer.

Dr. Hug will, we hope, pardon the reproduction of his admirable sketch.

Rhaetian Alps.

PIZ LINARD. N. FACE (3414 m. = 11,198 ft.). August 22, 1922. W. Flaig and A. Weidle. From the Alp Marangun in Val Lavinuoz

ascend the Muntanellas glacier to the foot of the N. face, 700 m. high. This is divided in two by an enormous buttress. The rest



of the route is indicated on the sketch. No times given. From *Alpina*, 1923, p. 157.

Maligne Lake District (Canadian Rockies).

MT. BRAZEAU (11,300 ft.). July 9, 1923. Messrs. Howard Palmer and Allen Carpe, accompanied by W. D. Harris of Jasper. It was named in 1902 by Dr. A. P. Coleman, who attempted it from the direction of Brazeau Lake. The position of the mountain had not been mapped, and it was unknown from the direction of Maligne Lake. The ascent was made by a round-about route from a camp located about five miles to the south of the S. end of the Lake, the total time consumed being 19 hours and 50 minutes. The route of ascent was by the S.E. ridge, two intermediate peaks being traversed, altitudes approximately 10,400 ft. The length of the route both ways was twelve miles.

MT. UNWIN (10,600 ft.). July 13, 1923. The same party. It is situated on the W. shore of Maligne Lake, and is the higher of the twin summits so prominent from the N. end of the Lake. The climb was made from a camp situated in the valley of Maligne River at the W. base of the peak, and occupied 17 hours. The S.W. slopes and S. ridge were followed to the summit. Rock buttresses on the ridge, and steps cutting in ice around the heads of a number of couloirs, presented some difficult features. Observations were made on this and other climbs with a view to the preparation of a map of the group surrounding the S. end of the Lake, a particularly beautiful section of the mountains practically unknown.

HOWARD PALMER.

VARIOUS EXPEDITIONS.

Mont Blanc Group.

COL DES NANTILLONS (3292 m. = 10,798 ft.) FROM THE GLACIER D'ENVERS DE BLAITÈRE (Second complete ascent).—August 13, 1923. Messrs. G. S. BOWER, A. S. PIGOTT, MORLEY WOOD. The party left the Montanvert at 2.40 A.M., and reached, at 7.30, the highest point of the most northerly bay of the Glacier d'Envers de Blaitère, at the foot of a rock couloir descending from the conspicuous V notch in the skyline marking the lower col (nearer the Grépon).

The bergschrund was practically non-existent. A red groove on the left of the couloir was followed, without serious difficulty, for some distance. The slabs above were then climbed until their difficulty suggested a move to the buttress on their left, of which the top forms the rocky outcrop between the two cols. A careful line was taken up the buttress, but ultimately the party was confronted with a lofty red tower which could not be turned. A notch in its right-hand sky-line was attained by way of a crack in its face, followed by a traverse to the right, and gave very stiff climbing, the most difficult and trying met with during the expedition. A short distance higher the party collected on a neck joining the top of the tower to the foot of a more indonitable looking one above, and it was decided to finish the last 400 ft. or so in the couloir on the right. This was reached by easy ledges and the various pitches climbed, without serious difficulty, on the left-hand side in practically every case.

The col was reached at 2.30 P.M. and the Montanvert at 6.15 P.M. Boots were worn throughout, and two 80 ft. lengths of rope were used. The rock was of excellent quality. The Knubel Fissure was not recognised, and it is believed that the route taken lay to the left of this, and the central portion to the left of that taken by MM. T. de Lépiney and Savard when making the first complete ascent in July 1921.

[This account, and M. Savard's paper in *La Revue Alpine*, xxii. 107 seq. (of which a précis, including his sketch, appears under 'New Expeditions'), has been submitted to Mr. Geoffrey Young, who writes :

MM. T. de Lépiney and Savard's fine climb follows ours throughout—except that they did a traverse-and-slab alternative (closer in to the back of the couloir) where we did the 'crack' further out on its left containing wall. On Savard's slab the rock was too wet, at the time of our attempt, to be sound. The same difference in conditions is noticeable higher up, where the French climbers were able to 'move together' on slabs which necessitated our

moving singly and with caution. M. Savard assumes the top of the 'Knubel Crack' to be about the highest point reached by our party. As a matter of fact, this was the *start* of our real climbing. Our actual highest point was only a little below the letter E on his diagram, not in the couloir but out on the buttress to its left. This is made quite clear in our account¹; as also that, on looking down from the col a few days later, we were able to locate our turning-point on the slabs, about 500 ft. below the col. However, the matter is unimportant; and I am glad that that unclimbed section was left to tempt and to reward such a gallant pair!

Messrs. Bower, Pigott, and Morley Wood's second ascent created yet another initial route, leaving the couloir earlier, and ascending the difficult buttress on its left. They thus turned our 'crack' on its left, while the French climbers' route passed it on the right. All three routes approximate at about the top of the crack; but Bower's party continued to keep more out upon the buttress to the left. The two successful ascents appear to unite not far above the point in the couloir to which we descended—when driven off the buttress by the storm—and they finish up the same general line. If Bower is correct in estimating this last, easier stretch of slabs at '400 ft.', our turning point must have been nearer to the col than I thought when I placed it at '500 ft.' The buttress climb made by Bower and his friends (in boots) was a splendid performance; and probably, taken all together, the hardest of the three.

G. WINTHROP YOUNG.]

Pennines.

DENT BLANCHE (4364 m. = 14,318 ft.) BY E. ARÊTE.—September 7, 1923. Mr. E. G. Oliver, with Adolf and Alfred Aufdenblatten. Our objective was the Dent d'Hérens, but both E. and S. arêtes of Dent Blanche, appearing fairly free of snow, we determined to try the E. arête from Col de Zinal, though from the quantity of new snow visible on N. faces of Dent d'Hérens and Matterhorn, we ought to have anticipated trouble on the reverse flank of the E. Arête.

Left Schönbühl 2 A.M., reached top of moraine 3.15. and foot of rocks below Col de Zinal 4.15–4.45. With first daylight crossed Bergschrund and reached Col at 5.30.

The E. arête of Dent Blanche rises from Col de Zinal in three distinct flights. The first flight from Col runs almost due S., the second and third are practically due E. The third flight starts from point where true E. arête joins the Viereselsgrat, which is really a great N.E. spur thrown out into the Glacier Durand. The conspicuous red gendarme is situated on the second flight of arête, so that it is not encountered at all if one climbs the Viereselsgrat by the ordinary way from the Mountet.

Leaving Col, followed arête over broken rocks, turned a gendarme

¹ *A.J.* xxv. 180–181.

by traversing on E. face, then followed arête to point where it turns W. below the great red tower—i.e. junction of first and second flights of arête (6.30, 1 hour from Col). Climbed second flight over rotten rocks, turning great red gendarme on S. side, along broad sloping terrace, free from snow, below the gendarme. Reached arête above red gendarme (8.15) and followed crest to junction with Viereselsgrat (9.30). Third flight starting at this point was climbed by crest itself, except one large gendarme turned on N. (Zinal) side. This was blocked with new snow and ice and causing difficulty and loss of time. Went over several gendarmes affording interesting climbing on firm rocks, and passed two or three short snow arêtes, corniced to some extent but not difficult. Reached last rocks below final snow arête 12.15–12.30. Top looked quite near, about half an hour away, but snow arête proved difficult and troublesome affair. S. face all ice, and N. face a deep layer of powdery snow on ice, so compelled to proceed on arête itself, overlaid with icicles and frozen snow to a depth of 2 to 3 ft. This had to be cleared off and the steps made through powdery snow into the ice beneath. We were obliged to go *d cheval* in two or three places. We passed under one and over two other large cornices, all overhanging on N. side. This part of the climb required all Adolf's skill as an iceman. He made the steps with his usual speed, advancing without the slightest hesitation, but it took $2\frac{3}{4}$ hours to negotiate this short distance. Last rocks 12.30, top 15.15., or $13\frac{1}{2}$ hours from hut, $9\frac{1}{2}$ hours from Col, and $5\frac{3}{4}$ hours from junction of the arêtes, including halts about $1\frac{1}{4}$ hour.

Left top 16.00, found S. arête good going except twice, to turn gendarmes on W. face, when troubled with new snow and bad conditions. Worst part of descent was lower part of Wandfluh, deep powdery snow over slabs. On upper part snow was tolerable, but lower was liable to avalanche, and required great care. Reached glacier 20.00 just before dark and Schönbühl 21.15 ($19\frac{1}{4}$ hours from start).

This is a fine climb quite free from danger and very interesting. With good conditions especially on the snow arête, I estimate we could have reduced our time of ascent by about three hours. Our ascent was made on the third day after several days of bad weather. We had, however, an absolutely perfect day of brilliant sunshine.

WEISSHORN (4512 m. = 14,804 ft.), BY S.W. ARÊTE (SCHALLIGRAT).—September 11, 1923. Mr. E. G. Oliver, with Adolf and Alfred Aufdenblatten and Theodore Biner.¹ Owing to unsettled weather, spent the night in large cow-shed to left of moraine of Hohlicht Glacier, about 2100 m., three hours below regular bivouac place.

¹ Porter to the bivouac. He begged earnestly to be allowed to make the ascent.

Left shed 2.10 A.M. and reached regular bivouac place up very bad moraine 5.00–5.30. Bare lower part of Schalliberg Glacier demanded much step-cutting.

Schallijoch 8.30–9.0. Turned first tower by traverse to right to gain arête below small light reddish gendarme of a curious shape. From here we followed the arête over all the gendarmes to the top, except that one great red tower was turned by traverse to the right (on the Randa side). The arête was in splendid condition and almost free of snow. We found no cornices.

The climb was interesting but never very difficult. The rock is good in most places, once the arête is reached.

Reached top 13.45 ($4\frac{3}{4}$ hours from Schallijoch including halts totalling about $\frac{3}{4}$ of an hour).

Left top 15.00 and descending by ordinary route reached Weiss-horn hut 19.00 and Randa, after losing the path in the dark and perhaps one hour of time, at 12.45.

The descent was rendered troublesome by some ice and a great quantity of new snow.

LA LUETTE (3544 m. = 11,628 ft.), MONT PLEUREUR (3706 m. = 12,161 ft.), LA SALLE (3641 m. = 11,936 ft.). July 26, 1923. H. R. C. Carr and George Lister.—They ascended La Luette in 3 hours from the Val des Dix hut by the Glacier de la Luette. They then traversed the ridge to the Mont Pleureur in $1\frac{3}{4}$ hours, meeting with no difficulty in particular though the ridge was fairly narrow in places. The descent towards the N., however, took $2\frac{1}{2}$ hours, as steps had to be cut in ice down a slope some 400 ft. long; there did not seem to be any way of avoiding this rather laborious section. From the snow col to the N. of the Mont Pleureur the rocky summit of the Salle was reached in a few minutes. The hut was regained by a quick and easy route down the E. face of this peak (rather more to the N. of that indicated in the new guide-book),¹ which took about 2 hours. Some time was lost in an attempt to descend to the Col de Vasevay, but long slopes of steep ice rendered this route unattractive. The Mont Pleureur possesses some very spectacular cliffs on its western side, but the rock is nowhere suitable for climbing. The hut is well placed and comfortable, but seems little used by English mountaineers.

Rhaetian Alps.

PIZ LAGREV (3168 m. = 10,394 ft.), BY W. FACE.—This beautiful peak, in the Julier Group, so conspicuous from the Maloja Pass, is usually ascended thence or from Sils, and almost always by its S.E. slopes.

¹ *Alpes Valaisannes*, vol. i. (1923), edited by M. Marcel Kurz and reviewed in the current number. The whole route can be followed in the admirable sketches pp. 258–9 and 262.

The southern subsidiary peak, from which the true summit is easily accessible, has, I believe, been reached direct by its precipitous rock-face, composed of stone-swept couloirs and formidable ridges. This face is separated from the W. face—also a vast precipice—by a rock arête, ending below in three conspicuous Aiguillettes just E. of the Forcolo di Gravasalvas.

Our ascent of the W. face was made in 1922, but, as it was not known whether it had been made before, it was not recorded. The history of this climb may be worth recounting. On June 29, 1908, Wicks, Bradby and the writer started from Maloja at 9 A.M. for a training walk, and went up to the little gap between the Aiguillettes and the S.W. arête of Lagrev. Here we roped, and spent some time upon the rocks of the arête, reaching a wooden pole driven into a crack in about an hour. We thought this might indicate a turning point on to the S. face, as progress up the arête seemed barred, but it may have simply marked the limit of some previous attempt. Descending, we found that it would not be difficult to traverse on to the W. face, and consequently, on July 15, we returned to the fray. Working at first directly upwards from the Aiguillettes Col and then towards the left over very rotten rocks, we found an easy shelf completely traversing the precipice, and finally reached the top of a conspicuous couloir at the extreme N. end of the W. face. But by this time snow, which had begun an hour earlier, was falling heavily, and we retraced our steps with great difficulty, partly because we could not see the way, and partly because of the snow, now six inches deep.

No opportunity occurred again till July 5, 1922, when Wills, Mothersill and I, with a guide who did not help us very much, but carried a good load, made the ascent. Going by the same route, we reached the point near the top of the above-mentioned couloir (at the N. end of the W. face) in about $5\frac{1}{2}$ hours. Here we found an easy ledge, zigzagging upwards and backwards (N. to S.) and terminating about 200 ft. below the ridge in steep but firm rocks, the ascent of which landed us in a gap on the arête. Here we descended a few feet on the E. side on to easy snow, but had another good scramble up the final rocks of the S.W. arête, reaching the summit in $7\frac{1}{2}$ hours (halts included) from Maloja.

Any party repeating this climb (and it is one well worth doing), should make sure of traversing nearly the whole breadth of the W. face (S. to N.) before turning backwards and upwards towards the final pitch. Bradby and Klucker, who repeated the climb in 1923—while I nursed a sprained ankle—made a straight diagonal, instead of a zigzag, towards the same, and probably the only, passage up the final pitch of the cliff. They got on to dangerous and rotten rocks and took some hours longer than they would have done had they traversed the face nearly level before striking upwards.

Since writing the above, I have heard from Dr. Finzi that

he and his guides made the ascent by this route in 1921, and that they found traces of a previous ascent. Klucker told me this year (1923) that he had never heard of any previous attempt on the W. face, and that he was sure no ascent had been recorded. No one knows this group and its literature better than he does, and I accepted his word unreservedly. The statement in 'Ball's Central Alps' (pt. ii. p. 217), 'From the Gravasalvas Pass the Piz Lagrev can be climbed by reaching the W. ridge and following it to the summit,' appears to need explanation.

Many years ago, in the days of the 'Zermatt Pocket-book,' Sir Martin Conway laid it down that the only way to deal with mountaineering records was to regard unrecorded ascents as unmade. Consequently, it may be useful to insert this belated description in the ALPINE JOURNAL.

C. WILSON.

ALPINE NOTES.

'BALL'S ALPINE GUIDE,' THE WESTERN ALPS.—A new edition (1898) of this work, reconstructed and revised on behalf of the Alpine Club by the Rev. W. A. B. Coolidge, Fellow of Magdalen College, Oxford, can be obtained from all booksellers, or from Edward Stanford, Limited, 12 Long Acre, W.C. 2. It covers the Western Alps from the Mediterranean to the Simplon, S. of the Rhone. Price 10s. net, post free 10s. 4d. net.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART I.—A new edition (1907) of this work, reconstructed and revised on behalf of the Alpine Club under the general editorship of the Rev. A. A. Valentine-Richards, Fellow of Christ's College, Cambridge, can be obtained from all booksellers, or from Edward Stanford, Limited, 12 Long Acre, W.C. 2. It includes those portions of Switzerland to the N. of the Rhone and Rhine Valleys. Price 5s. net, post free 5s. 4d. net, or unbound, 2s. 10d.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART II.—A new edition (1911) of this work, reconstructed and revised on behalf of the Alpine Club under the general editorship of the Rev. George Broke, can be obtained from all booksellers, or from Edward Stanford, Limited, 12 Long Acre, W.C. 2. It includes those Alpine portions of Switzerland, Italy, and Austria which lie S. and E. of the Rhone and Rhine, S. of the Arlberg, and W. of the Adige. Price 5s. net, post free 5s. 4d. net, or unbound, 2s. 10d.

MAP OF THE VALSESIA.—Some copies of the Map issued with the ALPINE JOURNAL, No. 209, and of the plates opposite pages 108

and 128 in No. 208, are available and can be obtained from the Assistant Secretary, Alpine Club, 23 Savile Row, W. Price for the set (the Map mounted on cloth), 3s.

THE GUIDE DES ALPES VALAISANNES.—The four volumes are now all issued, viz. : Vol. I., Col Ferret to Col de Collon, par M. Kurz, 10s. Vol. II., Col de Collon to Col Théodule, par Dr. Dübi, 9s. Vol. III., Col Théodule to Weisstor, par Dr. Dübi, 8s. Vol. IV., Col du Simplon to Furka, par M. Kurz, 8s. To be obtained from Stanford, Long Acre, W.C. 2, at above prices. This French edition contains later information and is copiously furnished with route sketches.

A CLIMBER'S GUIDE TO THE ROCKY MOUNTAINS OF CANADA.—By Howard Palmer and J. Monroe Thornton, 1921. This very useful summary, with several maps, of what has been done in the Rockies to 1921, can be obtained from the Assistant Secretary, price 7s. 6d.

THE 'CLUBFÜHRER DURCH DIE BÜNDNERALPEN.'—Vol. IV., covering the Bregaglia and the Disgrazia group, by H. Rütter, with the assistance of Christian Klucker, can be obtained from Sauerländer and Co., Aarau, Switzerland.

ALPINE JOURNAL.—A full set, Vols. I. to XXXI., in brown cloth, and XXXII. to XXXIV. in parts, is for sale.—Apply, Assistant Secretary.

THE ALPINE CLUB OBITUARY :	Date of Election
Browning, Oscar	1864
Middlemore, T.	1871
Bull, Rev. T. Williamson	1875
Davidson, Sir W. E.	1875
Sterndale, Rt. Hon. Lord	1894
Phillips, H. W.	1903
Ker, W. P.	1909
Oppenheim, Col. L. C. F.	1911
Hayden, Sir Henry H.	1921

POPE PIUS XI. has taken the occasion of the celebration of the millenary of St. Bernard of Menthon to address to the Bishop of Annécý a, to mountaineers, very interesting letter.

His Holiness, after dwelling at some length on the character and virtues of St. Bernard and the service he rendered to travellers by his practical efforts to make the passages of the Alps less dangerous, proclaims him the Patron-Saint not only of the inhabitants of the Alps, but also of their visitors and of 'all who attempt to climb mountains.'

The letter concludes with an impressive tribute to the physical and moral benefits to be gained by the pursuit of mountaineering.

We furnish a translation of the Pope's words :

'Of all the exercises which afford a wholesome distraction there is—for a man who knows how to avoid rashness—none more serviceable than mountaineering for promoting both the health of the body and the vigour of the mind. In the laborious effort to gain the summits where the air is lighter and purer the climber gains new strength of limb, while in the endeavour to overcome the countless obstacles of the way the soul trains itself to conquer the difficulties of Duty ; and the superb spectacle of the vast horizons, which from the crest of the Alps offer themselves on all sides to our eyes, raises without effort our spirits to the divine Author and Sovereign of Nature.'

We deeply regret to have to record the death, on August 24, of Mrs. Wheeler, the wife of Arthur O. Wheeler, the principal founder, and now the Director, of the Alpine Club of Canada. Probably only a few persons are aware of the full measure of her devotion to the interests of the Club, but many English visitors will remember her gracious and kindly presence at Banff, where in the midst of much hard and exacting work she always seemed to be able to emerge, serene and smiling, with a few minutes to spare for them. The Club House can never be the same without her.

SIG. ORAZIO DE FALKNER, President Florence section C.A.I., died, we regret to hear, after a long illness, on September 29. M. de Falkner was English on his mother's side, while his father, a fervid irredentist, was of Alsatian extraction. He was formerly a very active mountaineer, principally in the Graians, Brenta group, and Dolomites. His father and he, then a youth, in 1886, were caught out on the Matterhorn in terrible weather, when Borckhart succumbed. The elder M. de Falkner's letter on the subject appeared in 'A.J.' xiii. 101 *seq.*

We much regret to note the announcement of the death, on March 23, of M. HENRI BOILEAU DE CASTELNAU, best known in Alpine circles as the conqueror, in 1877, led by the two Gaspards, of the Meije. M. de Castelnau was born late in 1857, and after this great ascent does not appear to have continued his Alpine expeditions.

We much regret to hear of the death at the age of 61 of M. CHARLES MONTANDON, brother of our Honorary Member. The family is of Neuchâtel-Albigensian origin of Montandon in the Jura. Both brothers commenced their Alpine career at a very early age, Charles being credited at 15 with the first ascent of Büttlassen quite alone. A number of first ascents stand to his credit, done for the most part with his brother Paul, thus : Tschingellochtighorn,

Hühnerthälihorn, Gastlosenspitze, Gr. Diamantstock, S. Klein-Lauteraarhorn, Gr. Rinderhorn, besides other less known ascents. In 1882 he and two companions made the first guideless passage of the Wetterlücke which, it will be remembered, had been crossed 16 years before by Dr. Dübi with Mr. Freshfield and Mr. Tucker, led by F. Devouassoud.

His Alpine career is the subject of a sympathetic notice by Dr. Dübi in *Alpina*, September 15, 1923.

VISITORS TO THE HUTS OF THE S.A.C.

Bétemps	720	Orny	903
Matterhorn Inn	192	J. Dupuis	857
Schönbühl	531	Britannia	622
Dom	93	Solvay	224
Weisshorn	75	Blümlisalp	1725
Mountet	357	Gspaltenhorn	371
Bertol	563	Mutthorn	610
Chanrion	411	Oberaletsch	112
Panossière	269	Konkordia	383
Finsteraarhorn	—	Boval	1481
Strahlegg	248	Tschierva	548
Gleckstein	595	Albigna	118
Rotondo	245	Sciora	63
Ruckhubel	772	Cadlimo	534
Etzli	400	Forno	216
Hüfi	588		
Clariden	660	Total to all huts	<u>33150</u>
Fridolin	212		

There was a diminution of over 11,000 against 1921, due probably to bad weather.

FAUTEUIL DES ALLEMANDS.—A well-equipped hut for 6 men to serve for the Aiguille Noire de Peuteret has now been built by the C.A.I.

THE VALLOT HUT.—M. Henri Bregeault, Hon. Sec. of the Paris section of the C.A.F., informs us that his section has taken this hut into its charge, and that by next August it is hoped to refit it.

NEW FINSTERAARHORN HUT.—In order 'to remedy the deplorable actual conditions,' a grant of 20,000fr. has been made by the C.A.S. to the Oberhasli section towards the construction of a new wooden hut to house thirty people, to be built rather below the present hut. (Total cost, 30,000fr.)

GELMERALP.—A hut on the Gelmeralp in the Diechttertal is to be built by the same section with the aid of a grant from the C.A.S. of 12,000fr. (Total cost, 35,000fr.). Few English climbers know even

where this is, but they will find the Gelmerhörner, especially the Klein Gelmerhorn, offer something equal to the best of the Aiguilles.

LAKE LOUISE DISTRICT (CANADIAN ROCKIES).—A fine stone hut has been built by the C.P.R. on Abbot Pass, considerably shortening many climbs.

MOUNT EVEREST EXPEDITION.—Lieut.-Colonel E. L. Strutt delivered a private lecture, accompanied by the film, on the Expedition of 1922 to their Majesties the King and Queen of the Belgians, the Duke of Brabant, and Count of Flanders, R.N., at the Palace, Brussels, on June 18. The Royal Family displayed the greatest possible interest in the lecture.

Colonel Strutt delivered lectures to General Sir A. Godley and the Rhine Army on June 19 and 20. The first was at Cologne, and over 4,000 officers (including the Commander-in-Chief and Lady Godley) and men attended. The second was delivered in a Zeppelin shed at Wahn where most of the Army of Occupation are engaged in field training. Over 3,000 officers and men attended. Both lectures were listened to, apparently, with the greatest interest and attention.

A NEW aeroplane altitude record has been made of 35,237 feet.

GENERAL BRUCE has been elected an Hon. Member of the American A.C.

THE SCIENTIFIC REPORTS OF THE ITALIAN EXPEDITION TO THE HIMALAYA IN 1913-14.—These reports will form, when complete, a set of thirteen volumes. The first, on the 'Glaciology of Baltistan and Ladak,' has just been published. Sir Filippo De Filippi writes: 'We have in the press one volume on "Geodetical Observations" and one on "Anthropogeography," in addition to my own general report of the story of the enterprise, which is published by itself and does not form part of the set containing the results.'

THE SECOND CLEMENCEAU EXPEDITION.—At the end of his paper: 'First Mt. Clemenceau Expedition,' in the last JOURNAL, Mr. de Villiers-Schwab foreshadowed a further expedition. This year's party consisted of: H. B. de Villiers-Schwab, A.C., Henry S. Hall, jun., Am.A.C., Dana B. Durand, Norman V. P. Schwab, Bennett Durand, Amateurs; W. D. Harris, chief packer and cook, and 5 assistants.

The first three named constituted the climbing party proper, but Harris was taken along on the final climb, owing to the great size of the mountain and the number of crevasses.

The expedition left Jasper on July 19, reached Base Camp at the foot of Ghost Ridge by Wood River on the 24th, whence two days'

hard march established the climbers in Climbing Camp on July 26. A reconnaissance of the south side of Mt. Clemenceau was made on July 28 from a rock ridge across the névé field. Owing to much bad weather it was not until August 7 that a reconnaissance in force on the mountain itself could be undertaken, when a height of approximately 10,000 ft. was reached. The following day, a bivouac was placed at the south foot of the mountain, and starting about 4 A.M. on the 9th, the summit of Mt. Clemenceau was reached at 11.15 A.M. under good conditions of snow and weather. Climbing Camp was regained shortly before 8 P.M. On the 13th, the climbing party returned to Base Camp and arrived back in Jasper on the 18th.

A detailed paper is promised for the May JOURNAL.

ALASKA PENINSULA.—Towards the end of April Mr. V. A. Fynn made a second attempt to secure specimens of the large Kodiak bear. He sailed on May 1 from Bellingham, Washington, and landed at Squaw Harbour on Unga Island. From there he crossed to the mainland, 60 miles away, in a 45-ft. fishing smack, which returned with instructions to fetch the party forty days later.

The next day a storm set in which lasted eight days, aggravating an existing cold, and rendering the continuance of the journey inadvisable. His guide thereupon, in a 14-ft. open boat, fitted with a 2-h.p. engine, faced, with much courage, the 60 miles of open sea, to fetch the fishing smack, which conveyed the party back to Squaw Harbour.

The mountains in the country visited do not exceed 10,000 ft., but they rise right out of the sea, and 4000 or 5000 ft. peaks look quite imposing. There are a number of volcanoes and some very fine rock peaks, which, however, look unclimbable. The rocks above 3000 or 4000 ft. seem to be perpetually covered with a thick coating of ice, and these peaks look extremely like some of the Himalayan mountains depicted on Sella's photographs. The sharpest ridges are covered with bulging ice and icicles hanging down from the bulges.

Mr. Fynn's intention is to return to the same district in the spring of next year.

ENGLISH LAKE DISTRICT.—The Fell and Rock Climbing Club has made, to the National Trust, a magnificent presentation of about 1000 acres of lakeland, which, with Scafell Pike, the gift of Lord Leconfield, may well develop into a great National Park, as was suggested by Sir F. D. Acland, M.P., of the Governing Body of the National Trust, when taking delivery. We learn from *The Times* that the territory handed over to the nation may be roughly indicated as consisting of the mountains on both sides of the Styhead Pass from Glaramara to Lingmell. Beyond Scafell Pike the club have bought and given Scafell mountain, but there is still a gap between the Pike and Scafell itself not acquired, and in

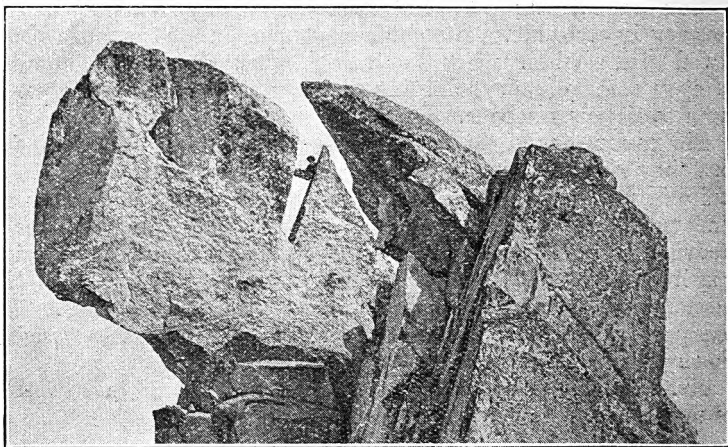
that gap lies the Mickledore chasim and escarpment. In the Gable group, with Great Gable itself, the land includes all the good climbing ground in Lakeland's choicest area, the Needle, Kern Knotts, etc., and away on the other side of the Styhead Pass all the land up to Sprinkling Tarn and Esk Hause. Bow Fell and Crinkle Crag, which lie in a different parish, would splendidly round off the National Park if ever an opportunity of acquiring them occurs.

The negotiations with Lord Lonsdale to acquire the Pillar may, it is hoped, seeing how great a sportsman he is, one day result in a fresh addition to the National Park.

The presentation was made as a memorial to the members who fell in the war.

Dr. Wakefield is the new President and Mr. Somervell (brother of Howard Somervell) the Hon. Sec.

BREGAGLIA GROUP.—I have just heard from St. Moritz that the 'Piz Gallo and the whole range near to it fell over towards the Bregaglia side. . . . Nobody can say how it happened . . . It



seems that between August 24 and September 4 it had not been visited. . . . The Gallo Ridge is the prolongation of the Sciora Ridge to the N. of the Cacciabella, *i.e.* towards Val Bregaglia. Claude Wilson climbed the Gallo this year.—E.L.S.

AN INCIDENT.—In *Alpina*, October 15, 1923, Herr H. E. Fierz, of Bâle section, states that on reaching the glacier *en route* for the traverse of Wellenkuppe-Obergabelhorn¹ 'Mr. Backhouse . . .

¹ Translated.

called me in as umpire. Two of his English acquaintances had a dispute with their guide [the younger brother of Mr. Backhouse's guide, Thomas Biner, killed with Mr. Backhouse soon afterwards]. The elder of the two Englishmen explained that he had engaged the younger Biner as porter, and that he therefore insisted that he (Biner) should go last on the rope. Biner declared, equally firmly, that he did not know the gentlemen well, and therefore declined to let them lead. . . . In the end the undesired guide was discharged. . . . After surmounting the great gendarme, 'looking round I saw that my friend [of the next following party] had remained behind. We heard a few shouts, then my friend's guide disappeared behind the tower and only reappeared, after fully 25 minutes, with another man. . . . The following had occurred. Just as I had started on with the two Perren a shout for help came from below. The Englishman who, before reaching the Wellenkuppe, had declared, "I positively must refuse to go behind a guide," begged urgently for help to climb the gendarme. After Hermann Biner with some trouble had got him up, he requested that his companion should be pulled up. The latter, however, declined to risk the ascent, so that . . . the gentleman-guide had to be lowered down again.'

This is not pleasant reading. Men cannot reasonably expect a porter who does not know them to follow them blindly. It would appear, moreover, from the foregoing narrative that the porter was justified in his doubt. Men who aspire to be 'guideless climbers,' should avoid the crowded districts, where, generally, they have to follow a guided party or a well-marked trail or can call for willing assistance on someone else's guide. The name 'guideless' is an absurd misnomer in high season in the Zermatt district in particular, and to employ porters beyond the hut is inadmissible.

A JUBILEE ASCENT.—On August 21 Mr. A. L. Mumm, accompanied by General Bruce, Mr. H. F. Montagnier, his old guide, M. Inderbinen, and the young Champéry guide, Ernest Jex-Collet, repeated his ascent of 1873 of the *Tilis*.

THE N.E. arête of the Jungfrau was, on July 31, 1923, gained in 3 hours from the Col restaurant, at its second great step (c. 3,900 m.) by climbing the S. rock buttress of the latter from the Jungfraufirn. The party consisted of Herr G. V. Salis-Marschlins with Hans Schlunegger of Wengen who accompanied Herr Weber in 1911 on the first complete ascent by the N.E. arête. Times to arête 3 hours, to summit 2 hours.—*Alpina*, October 15, 1923.

MR. EUSTACE THOMAS climbed the Jungfrau, Mönch and Gr. Fiescherhorn in one day, also Chamois, Grépon and Blaitière in one day. The latter had been done by Mr. Geoffrey Young some years ago.

In three consecutive days Mr. Thomas traversed Rothorn—Trift

to Mountet, Dent Blanche via Viereselsgrat from Mountet to Schönbühl, and Matterhorn by the Z'Mutt to Zermatt. Guides, Joseph Knubel and Alexander Lager as second.

GRINDELWALD — SCHWARZHORN — FAULHORN — SIMELIHORN — RÖTHIHORN—GRINDELWALD.—This round was done on August 7 by Mr. Hasler in 12 hours 40 minutes (10 hours 30 minutes net), who incidentally then made his 116th ascent of the Faulhorn! A glance at the map will show the extent of the walk.

GANDEGG INN TO BÉTEMPS HUT.—Dr. Roger Hoffmann of Geneva with Gottfried and Alexander Perren. July 11, 1923.

Gandegg . . .	12.0 A.M.	Signalkuppe . . .	3.20 P.M.
Breithorn . . .	4.0	Zumsteinspitze . . .	4.40
Pollux . . .	6.25	Ostspitze . . .	6.0
Castor . . .	8.5	Dufourspitze . . .	6.20
W. Lyskamm . . .	10.40	Bétemps hut . . .	9.0
E. Lyskamm . . .	11.50		

TRIFT INN TO WEISSHORN HUT.—Mr. A. Versluys with Josef Marie Julen and Heinrich Pollinger. August 9, 1923.

Trift inn . . .	12.45 A.M.	Schallijoch . . .	11.50–12.50 P.M.
Rothhorn . . .	5.0	Weisshorn . . .	5.5 – 5.30
End of N. arête . . .	5.35–6.0	Below rock ridge . . .	7.15–7.50
Mominghorn . . .	7.5–7.15	Weisshorn hut . . .	8.45
Schallihorn . . .	9.45–10.10		

Gross 20 hours.

Nett 17 hours.

THE OXFORD UNIVERSITY MOUNTAINEERING CLUB.—The Club held a summer meeting, its second in the Alps, during the latter part of July. Arolla was chosen as the centre, but after the first few days members ranged far and wide among the adjacent mountains and valleys. Ascents were made for the most part without professional assistance, and the splendid weather which was a feature of the month enabled a large number of successful expeditions to be undertaken. These included the Dent Blanche, Matterhorn, Rothhorn, Wellenkuppe, Grand Combin, Dents des Bouquetins, Mont Collon, Aiguilles Rouges, Mont Blanc de Seilon and the Mont Pleureur, while among the passes traversed were the Cols de Valpelline, Valcournera, Collon, Seilon, Grand Cornier and Durand.

The party (which numbered 17 all told) much appreciated the well-known excellence of the Mont Collon Hotel, though it is to be feared that the liberality of M. Anzevui's cuisine gave occasion for some imprudence in the matter of diet which Nature handled with accustomed severity. The meeting was again voted a great success by all who attended it, and the Club will do well if it makes an Alpine meeting an annual event.

ROPES ON THE MATTERHORN.—It is reported that the younger Zermatt guides are much inclined to remove all the ropes on the Swiss side of the mountain—these are provided and maintained by the Corps of Guides. It is argued that the ropes enable guideless climbers to make the ascent to which their unaided powers are not equal. It would seem that the guides are within their rights in taking in the matter such steps as their interests dictate. From the climbing point of view, the Matterhorn is, of course, spoiled, as it is inconceivable that anyone will exert himself to *climb* the mountain when for long distances a rope dangles down alongside of him.

THE RIFFEL-ALP MOUNTAINEER'S PROGRESS.—

He comes, an inexperienced crock ;
 He's bear-led up the Horn of Stock ;
 Next, while contemptuous experts sniffle,
 He scrabbles up the Horn of Riffel ;
 His nose becomes a sorry sight
 After he's done the Horn of Breit.
 Yet soon he tops, with little parlo,
 The summit of the Horn of Strahl ;
 He braves, no more a gasping limp fish,
 The labours of the Horn of Rimpfisch ;
 Though sluggards vow they judged the day odd, you'll
 Find that he's crossed the Horn of Theodule.

The loosest boulder does not shift
 Beneath him on the Horn of Trift ;
 He sets the terrace in a chatter
 When seen upon the Horn of Matter ;
 He treads, as nimble as a goat,
 The slabs upon the Horn of Roth ;
 He scales, inflexible as marble,
 The two-pronged Horn of Ober-Gabel ;
 Lastly, the telescope of Zeiss
 Detects him up the Horn of Weiss.

L. R. WILBERFORCE.

THE LATE EDWARD T. COMPTON.—An oil painting by him, subject 'Glacier Scene in the Tyrol,' size about 5 ft. 6 ins. by 4 ft., price £30, may be seen (by kind permission) at the Alpine Club, 23 Savile Row, W.

MR. GEOFFERY YOUNG'S NEW POEMS.—'April and Rain' Sidgwick & Jackson, 3s. 6d., are announced. A review appears in the present number.

NEW ZEALAND NOTES.

FURTHER EXPLORATION OF THE MT. TUTOKO DISTRICT,
NEW ZEALAND.

IN his recent 'The Conquest of the New Zealand Alps' Mr. S. Turner devoted chapters x. to xii. to a description of his three expeditions in this district. He gives several photographs of the mountain itself and the neighbourhood, showing some fine glaciers. From the *Wellington Evening Post* for May 23, 1923, we learn that Mr. Turner left early in March for Hollyford Valley on a fourth expedition (see sketch map, p. 285 of his book). From the Hollyford Valley his party explored the head of Stickup creek, with a view to gaining the icefield at its head. They also explored the valley at the head of Lake McKerrow, whence, after about eight days' work, they got to the head of a great glacier with three ice-falls. His main object, however, was to find a pass by which tourists could make a journey all round the Tutoko group. In this he appears to have been successful. Mr. Turner's explorations involve considerable alterations in the present maps. The flora and fauna are described as very interesting. Mr. Turner is to be congratulated on his boundless enthusiasm for mountain exploration.

REVIEWS.

April and Rain. Poems by Geoffrey Winthrop Young. London: Sidgwick & Jackson, Ltd., 1923.

SELDOM does a book of verse touch the heart of the mountain-lover as this little volume does. We venture to think that it will add many to the admirers of Mr. Young's poems. It seems to us of a rarer fancy, a finer sympathy, and a more excellent workmanship than his previous volumes.

'So still rain falls, so gentle in its grief,
the falling tears stir not the still, green leaf—
rain falls so still.

So still it falls, the sun may steal away
bright tears yet trembling from the still green spray.

'So still rain rests, so faint the tears it sheds,
the misted violets droop no mourning heads—
rain rests so still.

So still it rests, so light the sorrow lies,
daisies laugh up, through brimming golden eyes.'

Here are two stanzas which show a perfect appreciation of form and rhythm, and a subtle simplicity which takes us captive.

The spirit which runs through the mountain poems is everywhere alive, even in the intimacies of the sequence with which the book begins. Thus the mountains find their place in the delightful verses 'To My Son,' from which we extract a few lines (would that space allowed us to quote them in full) :

' Take your share
in this keen frost of air, that cracks the oak
the sycamore and pine
to a loud welcome of your morning song.
Take your right to be strong ;
your freedom of deep skies, and autumn dawns,
your corner in the thoughts of friendlier folk
than dwell in lightless towns.
Fill up your eyes with light, your heart with laughter,
your soul with resolute life.'

It is easy to see how deeply the author loves his home, and how thoroughly he knows its every mood. 'April and Rain' fitly stands on the title-page.

You breathe in reading it the open air, the rain wets your face, the shy April sun suddenly greets your eyes. You are walking among lakes and woods and mountains—the atmosphere is Westmorland.

Here is one of the mountain poems :

' Great mountains love great storms,
and lesser hills long rain.
They reach their arms in riotous ridge forms
to hail cloud-comrades from the drenching plain.
Their gorges drain the upward rush of thunder ;
Their torrents, speeding under,
pour back the lees to breed cloud-riot again.

' Great mountains hold harsh truth,
and lesser heights long trust.
The warring crests make comrades of our youth,
burnish our manhood, rasp our spirit-rust.
Kind hills bend for our age a gentler shoulder ;
staying our hearts, grown older,
with hope new-fashioned from our faltering dust.

Here is the second stanza of another mountain poem :

' Mountains are most beautiful
in September.

For evening and distance,
 the sun's more level glance
 lifts under curling lashes of rain-mist
 to rest on hills, silvering, and shadow-kissed :
 in our September
 all hours of life grow beautiful.'

In reading Mr. Young's pages we feel little inclination to criticise his wording, or cavil at a phrase. We are grateful to him for recalling so much of the gladness of the hills, so much of the power of the mountains to catch us in their mysterious web of joy and gloom.

Nor is the criticism of life which Matthew Arnold demanded in true poetry absent. Take the following lines :

' These splendid limbs—
 Life lent you them ; you did not make nor choose them ;
 but yours the right to use them
 right royally for a span.
 When the light dims,
 When their day wanes, and all the stars are beckoning,
 see you return them proudly for the reckoning,
 to prove you lived a man.'

Let us conclude our quotations with a poem which wins us at once, and which we shall long hold in our hearts :

' I have not lost the magic of long days ;
 I live them, dream them still.
 Still am I master of the starry ways,
 and freeman of the hill.
 Shattered my glass, ere half the sands had run—
 I hold the heights, I hold the heights I won.
 ' Mine still the hope that hailed me from each height,
 mine the unresting flame.
 With dreams I charmed each doing to delight ;
 I charm my rest the same.
 Severed my skein, ere half the strands were spun—
 I keep the dreams, I keep the dreams I won.
 ' What if I live no more those kingly days ?
 their night sleeps with me still.
 I dream my feet upon the starry ways ;
 my heart rests in the hill.
 I may not grudge the little left undone ;
 I hold the heights, I keep the dreams I won.'

G. Y.

The Assault on Mount Everest, 1922. By Brigadier-General Hon. C. G. Bruce, C.B., M.V.O., and other members of the expedition. Arnold. 25s.

A YEAR ago neither scientist nor mountaineer could tell with any certainty whether the human frame could endure the exertions of

climbing to the top of Everest and there was a baffling difference of opinion between the best qualified prophets. To-day we have before us a record of the first determined assault. It was delivered immediately after the long and difficult journey through Tibet, and was quickly brought to an end by an early monsoon. Yet it has proved beyond question the possibility of an ascent.

General Bruce has played no small part in bringing this about and not the least of his achievements is the thoroughly readable account of his expedition which fills the first half of the book. Though much of this account must of necessity be an itinerary, it does not contain a dull page. The journey through Tibet lacked the complete novelty which made it so interesting in 1921, but the author fully makes up for this by his shrewd yet sympathetic observation of everyone around him. He is at his best when telling us of the many strange men who travelled in his caravan, or of the natives whom he met on the way, and we should have welcomed more of this side of his story. We would, for instance, gladly have learnt something of the eighteen smiling and woolly-headed nuns of Ta-tsang, who appear to have so thoroughly enjoyed lining up for the photograph which is reproduced on page 34, or of the correct ceremonial for the placing of the 'ubiquitous Homburg hat' upon the head of a Gembo La. After the coming of the monsoon, General Bruce and some of his party travelled back through the Kharta, and we are given a description of the pleasures of travel in this moist and fertile land, as compared with the arid and wind-swept plains of Tibet.

Mr. Mallory has contributed a detailed account of his journey up the Rongbuk Glacier, and the great climb of May 19 and 20, in which he took part. His narrative is enlivened by vivid descriptions of his feelings and thoughts while living in high camps, climbing at great altitudes, or struggling with extreme mental and physical exhaustion. Incidentally he discloses that his long experience of climbing without professional assistance has taught him one of the great secrets of mountain happiness. One sentence on this subject is such an epitome of what goes to make up happy success in high mountain enterprise that it is worthy of quotation. 'We had a single aim in common and regarded it from common ground. We had no leader within the full meaning of the word, no one in authority over the rest to command as captain. We all knew equally what was required to be done from first to last and when occasion arose for doing it one of us did it.'

Captain Finch tells the stirring tale of the second attempt, how he and his two companions held on against a furious gale in a camp at 25,500 feet, how after twenty-four hours they rejected an opportunity of retreat which would have proved irresistible to many men, and how they held on for a second night and then, in spite of starvation diet, continued the climb. The arrival of two of the party at the record height of 27,300 feet after such an experience

is an astonishing example of determination in the face of adverse circumstances.

Mr. Somervell makes valuable contributions on acclimatisation to high altitudes and Tibetan culture. Physiologists will find occupation in the attempt to analyse the still scanty evidence as to the advantages of oxygen in high mountaineering. To the layman the most striking piece of evidence in its favour is Captain Finch's account of its effect during the second night at his highest camp, rather than anything which he tells us of its use while he was climbing. We note that Mr. Somervell, the one man with a medical training who has ever climbed to a height of 25,000 feet, is by no means an oxygen enthusiast.

Mr. Mallory, in giving his personal views as to the best method of getting to the top of Mt. Everest, expresses the hope that the reader may find the book the more interesting if the joint authors disagree. The reader will not be disappointed in this respect. Mr. Mallory is in favour of two camps above the Chang La with a supporting party of climbers at the highest camp. He gives a qualified approval to the use of oxygen, but believes in the possibility of an ascent without its use. Captain Finch makes the interesting suggestion that the Chang La might be more easily reached from its west side by the main Rongbuk Glacier. He is strongly of opinion that only one camp should be made above the Chang La, and advocates the use of oxygen from about 22,000 feet upwards. Mr. Somervell would rely largely on acclimatisation to high altitudes and would have nine or ten climbers remain at a high camp and make repeated attempts. Were it possible to have nine or ten Mr. Somervells in the high camp, this plan would doubtless succeed. A point upon which there is general agreement is that the final camp must be pushed further up the mountain, the 3500 feet which remained between Captain Finch's highest camp and the top being too much for the last day.

Though hampered by their other duties as officers of the expedition, Dr. Longstaff and Major Norton found some time for zoology and botany, and Dr. Longstaff gives a short account of the result of their work. In spite of the barren nature of the greater part of the country through which they travelled and the disinclination to take animal life, which is a marked feature of Tibetan civilisation, they were able to bring back a number of interesting specimens.

Captain Noel, who is responsible for most of the excellent illustrations which adorn the book, is described in Sir Francis Young-husband's introduction as a whole-time photographer. No one who reads the account of his visit to the Chang La, will deny him this title. Taking his cinematograph apparatus with him he stayed there for three consecutive nights, at a height of 23,000 feet, rendering services to the expedition which evidently went far beyond the realms of photography.

For the general public the story of the assault of 1922 will provide

just that spice of dangers encountered, that slight suggestion of do or die, which it has demanded of its explorers elsewhere. It is doubtful whether educated mountaineering opinion will be wholly uncritical. Many members of the Alpine Club will disagree with the assertion of one of the authors that on Everest the margin of safety must be narrowed down, if necessary, to vanishing point, and that the climber must drive his body on and on, even to destruction if need be. Judged solely by the accounts placed before us in this book, the risks run both by climbers and porters appear to us to have been on more than one occasion out of all proportion to the object to be attained.

The illustrations are simply superb, and the price for a book turned out as this is, is very moderate.

Guide des Alpes Valaisannes. Vol. i. Du Col Ferret au Col de Collon. Par Marcel Kurz, A.C., etc. Payot & Cie. Lausanne. 1923. 10 Swiss francs.

THIS volume completes the series of Valais special guides published by the S.A.C. viz. :

Vol. i. Col Ferret au Col de Collon. Par Marcel Kurz. 10s.¹

Vol. ii. Col de Collon au Col Théodule. Par le Dr. Dübi. 9s.

Vol. iii. Col Théodule au Simplon. " " 8s.

Vol. iv. Simplon à la Furka. Par " Marcel " Kurz. 8s.

Vol. iv. was reviewed in 'A.J.' xxxiii. 451.

The present volume covers a district, some of which is still imperfectly mapped and not often visited. M. Kurz has spent some considerable time on the spot clearing up various points, so that we are now in possession of dependable information upon the whole district.

The volume includes the first six sections of the 'Climbers' Guide to the Central Pennine Alps,' published over thirty years ago. The exploration that has taken place may be roughly measured by the fact that the Velan district in the new volume takes 60 pages as against 12, and the Combin district 40 pages as against 10 in the older book. It is, however, understood that the additional information of the present volume is based on original research, and that the Swiss Club wishes it to be considered as an independent work.

It forgets, however, that it turned full late to Guide-book making when already a whole series of Climbers' Guides had been issued by the labours of Mr. Coolidge and Sir Martin Conway. These established an eminently practical type. The earlier Swiss Club *Hochgebirgsführer*, so far as they dealt with districts covered by the Climbers' Guides, were entitled *translations* of these, brought, of course, up to date.

The present volume is, with the lapse of time, so much fuller

¹ Obtainable from Stanford, 12 Long Acre, W.C. 2, at these prices.

that it could not bear that designation. But it would have been at least courteous had the title page borne the former imprint :

‘ Avec utilisation des Climbers’ Guides du Dr. W. A. B. Coolidge
et de Sir Martin Conway.’

This is, of course, not the business of the author, who is responsible solely for the contents of the book—not for its title.

One is unwilling to conceive anything so futile as the possibility that the present authorities of the C.A.S. are suffering from an attack of chauvinism, or resentment at the share of English mountaineers in the opening up of the ‘Playground of Europe.’ Viewed on the purely material grounds, Englishmen have been, are, and hope to continue to be, good customers of the uniformly excellent Swiss hotels and employers of the corps of great guides which, more than anyone, our pioneers did build up and inspire to great, and splendidly appreciated, deeds.

Once I was requested to omit frequent or any mention of Mr. Coolidge in any Alpine article I might write. My reply was that I might as well attempt to write a treatise on Theology and omit the name of the Almighty !

As a ‘veteran’ of the C.A.S., I venture to recommend its Governors to act likewise, and to try to realise that any failure to acknowledge the pioneer services to mountaineering of Mr. Coolidge and Sir Martin Conway, fully and generously, will stultify themselves in the eyes of the informed brotherhood of mountaineers. I trust the title page of any further edition of this valuable book will not peradventure omit, on orders, any reference to M. Marcel Kurz !

You, my young, enthusiastic friend are still at an age when you cannot conceive ever growing old or being passed over as a back number. We veterans rejoice at an enthusiasm which calls up to us the past, and I dare say in the resentment at any attempt to kick away or ignore a ladder that helped us all, some fellow feeling may possibly creep in !

Be that as it may the C.A.S. could not have entrusted the work to abler hands. By profession a topographical engineer who has been in Swiss and Greek service, M. Kurz is one of the most capable and energetic mountaineers of the day, and in this volume he exhibits valuable powers of research. We mountaineers have every reason to be grateful for the very close application that has produced it.

One feature of supreme importance is the admirable series of fifty-six route-marked sketches due to the skilled draftsmanship of M. Charles Jacot Guillarmod, the topographical engineer, lately returned from the Chinese Government service, who was also responsible for the sketches in vol. ii. To me, who am prone to idleness, these are of much greater value, as more easy of assimilation than even the text ; in fact they make even a map superfluous. Those of the Combin, for example, on pages 97, 114, 115, 118, 120, and 125, are superb. Fynn and I with these would not have

failed to find the line of descent on the W. side of the Col de Sonadon !

One gathers that a new edition of the Siegfried map to cover the frontier ridge may soon be expected, and that it will clear up much of the faulty presentation of the terrain on the other side of the frontier. Meantime the present volume contains sketch maps 1:75000 of the Velan and Combin groups and a detail map 1:25000 of the Région de Crête Sèche, likewise by M. Guillarmod.

The volume is a joy to look through, and gives equal delight to the veteran like myself, now a mere gleaner, as it must to the graduating mountaineer with a whole harvest of summits before him.

The book could have been much lighter. The 'Mont Blanc Führer' of the Austrian Club is a notable example of weight-saving and should be followed. I see what M. Kurz says in the admirable preface, but every ounce counts.

Probably nothing has so much aided the exploration of the Alps as these careful compilations, the development of which we, of course, owe to Mr. Coolidge, Sir Martin Conway and others. I do not forget the various Itineraria issued by the Swiss Club as long ago as the 'sixties.

For the climber weary of the crowded Zermatt and Oberland mountains there is here a great district where he will hardly be disturbed, and to the opening up of which English mountaineers have contributed not a little, of which the author is very generous in his appreciation.

However careful the author, a Climbers' Guide must be in a constant state of revision, and climbers can best show their appreciation of the arduous work of the authors of such guides by taking *on the spot* careful and detailed notes, whether in amplification or in correction of the existing information.

J. P. FARRAR.

Le Cervin par l'Image. Par Charles Gos. Chambéry, 1923.

It was a happy idea of the author of this little book to bring together reproductions, chronologically arranged, of various pictorial representations of the Matterhorn. Leaving aside two fragments of early maps in which the mountains are mere diagrams, the earliest truly pictorial representation of the mountain here reproduced is after a drawing by J. J. Meyer, dating from about 1820. It renders the main outline and details of the pyramid with an accuracy not again equalled for many years. Most of the pictures raise a curious psychological problem. They are by artists who presumably were able to draw with tolerable accuracy an object set before them. Nothing is more definite in form than a rock-mountain. Its outline is in no way vague. Anyone, in fact, who chose to give time and attention could succeed in depicting it truthfully. Every part can be measured. Yet one artist after another seems to experience a kind of compulsion to distort the

forms. Even Loppé, as late as 1864, at least doubles its precipitancy and sharpens the acuteness of the summit. The explanation is that the mountain did in fact thus impress all early visitors. Its imagined inaccessibility, its believed abruptness, its fancied cliffs, distorted the vision of those who beheld it. On this matter I can speak with the authority of experience, for somewhat thus I also falteringly drew it in the blind enthusiasm of boyhood on a first brief visit to Zermatt. Th. Müller, about 1854, is one of the few who kept his head and set down facts veraciously; and Ruskin, five years earlier, truthfully depicted the things he saw, though essential elements of the mountain's structure escaped his notice. The fact is that till men climbed the Matterhorn no one really saw it as in fact it is. It was by no means the result of chance that Whympfer first fixed the veracious type of mountain imagery which later artists were bound to follow. Climbers were the first to understand mountains and to realise the inadequacy of the rendering of them by romantic painters. This is the lesson we learn from turning over M. Gos's reproductions. Whether the cubist rendering which forms the last plate will appeal either to climbers or to mere lovers of mountain beauty is a question I will not attempt to prejudge. The key-note of the Matterhorn's beauty of form has always seemed to me to be the marvellous combination and contrast of curves which build up its outline. A cubist rendering replaces these curves by straight lines, and thus in my opinion obliterates the beauty of the mountain's form. Ruskin came nearer to essential truth when he compared the peak, as seen from Zermatt, to a rearing horse. I have always found it difficult to explain the likeness to others, but the elements of form in peak and horse have in fact much in common, and once you catch the analogy you can never forget it. The author's text accompanying his selection of illustrations is interesting and suggestive. His little volume will give much pleasure to mountain lovers of many kinds.

M. C.

Den Norske Turist Forening's Aarbok for 1923.

WE members of Den Norske Turist Forening have every reason to congratulate ourselves upon being connected, in however humble a degree, with a great and flourishing Scandinavian Institution. This last issue of the Aarbok is in every respect a first-rate Tourists' as well as a Mountaineers' Year-book, in the production of which no reasonable expense has been spared.

Fortunate enough to possess a copy of each annual issue since the initiation of the Forening, I can truly say that, in varied and special interest, the Aarbok for 1923 surpasses most of its predecessors. The copious illustrations are really beautiful, especially the plates which illustrate an interesting botanical paper by Dr. phil. Rolf Nordhagen, while some excellent views by our fellow A.C. member, Ferdinand Schjelderup, of the peaks overshadowing the renowned

Raftsund Sulitelma—many years ago considered to be the culminating point of Scandinavia—and the Dovre Fjeld are each honoured by an interesting paper.

During the last few years several very intricate caves have been discovered and explored in a limestone district in Central Norway. From the excellent illustrations these caverns much resemble those in Yorkshire, Derbyshire, and Somerset. The Norsk explorers of these have much the same wet, dirty and slippery low-roofed passages to creep, crawl or walk through as we have in England. In one respect they beat us, viz. in their cavern photography.

From every point of view the Aarbok for 1923 is admirable.

W. C. S.

Grenoble, Capitale des Alpes françaises. Par Henri Ferrand. J. Rey. Grenoble. 1923. 16 French francs.

THIS admirably got-up book, issued at the low price of 4s., is one of a series which includes 'La route des Alpes' (15 fr.), 'Aux Lacs Italiens' (15 fr.), 'Au Mont Blanc' (16 fr.), 'les Alpes françaises' (16 fr.). The 198 heliogravures are among the very best I have ever seen in any book of travel, while the text is characterised by that command of his subject to which our Hon. Member has accustomed us. To most of us Grenoble is known as a convenient sleeping-place en route for the 'Meidje.' This book is a revelation of undreamt of interests in the old town and of charming surrounding country.

An English edition is to be published by the Medici Society.

Aus der Firnenwelt. By J. J. Weilenmann. Vol. i. Rhätikin—Silvretta—Ferwall. Rudolf Rother. Munich. 4 Swiss francs (bound).

THIS enterprising publisher has produced, at a very low price, a new, well-printed edition of this famous old book, with quaint black and white illustrations. Weilenmann, born in 1819, was at least comparable to our own pioneers in the Alps. His expeditions were made with many disadvantages of which our people knew little or nothing. He could seldom secure the services of more than one guide, while many of his expeditions were made without guides and, frequently, alone. He may be said to be the pioneer of guideless climbing. Some of his chapters are among the pearls of Alpine literature.

Die Viertausender des Alpes. By Dr. Karl Blodig. Rudolf Rother. Munich. 1923. 10 Swiss francs.

DR. BLODIG is well known as a great mountaineer and writer on Alpine subjects. He enjoys the unique distinction of having ascended—nearly always without guides and as leader of his party—all the Alpine summits of 4000 metres and upwards. The Federal Bureau have, however, raised the height of Piz Zupo to 4002 metres, which will therefore require the Doctor's attention. In the present volume Dr. Blodig brings together the narratives of his ascents,

most of which have appeared in various periodicals. The book is of a convenient form and well printed, while the illustrations are for the most part admirable; many of them are quite novel. The author writes with a swing that carries his reader along, while his technical knowledge enables him to present an easily grasped and accurate picture of the climb.

One misses an account of one of the most adventurous climbs in the Alps—the passage of the Silbersattel—which, led by a great guide, Christian Ranggetiner, killed later on the Glockner, the author in 1880 was the first to do.

If an English edition could be produced at something like the same price it should sell; but English books seem to be as high-priced as ever, forcing one to curtail one's purchases.

Champéry et la Dent du Midi. Par Daniel Baud-Bovy. Published by the *Journal de Genève*, Geneva. Price bound 28 Swiss francs, post free.

THIS is another of the superb mountain books by the same author. The present volume contains eight full plates and over 100 text illustrations, many from photographs by the well-known Fréd. Boissonnas. The companion volumes are in the A.C. Library.

ACCIDENTS IN 1923.

THE ACCIDENT ON THE POINTE DE LA GLIÈRE.

I REACHED Pralognan from Paris on July 9, and found my friend and climbing companion, Colonel Lawrie Oppenheim, already arrived. On July 8 he had been up the Grande Casse by the ordinary route with Pierre Blanc of Bonneval-sur-Arc and a local porter. This expedition was the first of the season so far as Lawrie was concerned. Leaving Pralognan on July 10 Lawrie, Blanc, the local porter and myself went up to the Félix Faure Hut on the Col de la Vanoise, where we slept the night. It had been our intention to climb the Pointe de la Glière on the following day, but as it seemed to me a pity to waste the fine weather on a small peak like the Glière, I easily persuaded Lawrie to substitute the traverse of the Grande Casse for our projected expedition. On July 11, accordingly, we ascended the latter mountain, reaching the summit, viâ the N. face, in 4½ hours. The conditions were wonderful, and we slept a second night at the Félix Faure Hut. During the evening Adolph, son of Josef Pollinger, joined the party, the porter returning to Pralognan.

On July 12 we four left the hut at 06.25, and crossing the Lépéna glacier, mounted the steep easy cliffs to the N. of that glacier (these cliffs really constitute the S.W. arête of the lower *Aiguille de la Glière* just S. of the Pointe), crossed the small upper glacier, and arrived at the Col de la Glière, between the *Aiguille* and the Pointe, in some two hours from the hut. The day was brilliant and the heat very great. After a longish halt on the Col we gently climbed the Pointe by its S.E. arête, attaining the summit at 09.50. Leaving the top at 11.05 we regained the Col by the same route in about half an hour, and picked up our various impedimenta, coats, etc., which latter had been discarded owing to the heat. We also, on my suggestion and responsibility, unroped.¹ I had been with Lawrie on many expeditions winter and summer, and knew his high factor of safety. (During the ascent from the Col, we had been climbing on two ropes—Lawrie and Pollinger, Blanc and myself.) Crossing the small, flat and uncrevassed glacier, we took the same route as in the ascent, i.e. the S.W. arête of the *Aiguille*. The party were invariably very close together, in fact I cannot remember any part of the descent during which I could not have touched one or other of my companions. Frequently, indeed, we were more in 'line abreast' formation than in 'line ahead.' The rocks were absolutely dry, except at one spot where a large semi-circular hollow in the ridge was filled with a soft snow-patch, inclined at an angle of 30°–35° and covering some (?) fifty square yards. After descending this we came to more broken rocks, and the ridge again widened into a steep, easy cliff, interspersed with numerous broad ledges. At 12.15 we were in the following formation: Lawrie and Blanc, close to and abreast of each other, were standing on a ledge with their backs to the mountain, while Pollinger was some ten yards to their right, also abreast and standing still. I was immediately behind Lawrie, perhaps some eight feet above him, and was the only one of the party moving. (These and previous details are merely given to show that every possible precaution was being taken to obviate any danger arising from accidental dislodgment of stones; in fact, a few minutes before the accident Lawrie had asked me to change places and come behind the party, as being less likely to disturb stones.) As I was stepping down to the ledge

¹ During a previous ascent of the same peak made by Blanc and myself in 1921, we had not used the rope at all, either in the ascent or descent.

already occupied by Lawrie and Pierre—my impression is that I was sheltered at that instant by a high overhanging rock—a black shadow seemed to pass in front of my face, and, with a sickening crunch, a stone of perhaps fifty pounds' weight struck Lawrie on the back of the head, hurling him head foremost over the cliff. The body fell some 150 feet in two bounds, and brought up on a broad *débris* slope at the base of the cliffs, or more accurately, perhaps, at the foot of the S.W. *arête* of the Aiguille. As quickly as possible we hurried down to the spot, Adolph reaching Lawrie a minute or two before Pierre or myself. Death had been mercifully instantaneous.

Leaving Pollinger beside the body, Pierre and I scrambled down to the glacier and across to the Félix Faure hut. There we were at once joined by two of the Amiez family, father and son, and a porter. I remained in the hut for a few minutes to write out telegrams for the family, and overtook the others on the Lépéna glacier. The party reached the body at 14.00 hours. By 16.00, under Pierre's able instructions and the most willing exertions of the excellent Pralognan men, we had transported the body, wrapped in blankets, to the Pralognan path at the Lac des Vaches. Here we were met by a mule and sleigh, ordered up from Pralognan by telephone message from the Félix Faure hut. By 20.00 hours we had deposited our friend in the little upper chapel of Pralognan.

As to the causes of the accident, I prefer to look at it simply as an act of God. The fatal stone was the only one seen to fall throughout the day, and it fell at the one spot—i.e. where the *arête* momentarily widens into a cliff—where it could do any harm. The stone had been most probably disturbed some minutes previously by one of the party passing over it, and, having begun to slide, fell at the psychological instant.

The use of the rope, almost an absurdity for a party like ours, could not have saved my friend. He was dead before the fall, to which numerous traces on and just below the ledge where he was struck bore only too certain witness. The fall of a stone of the size mentioned even from a height of 20 ft. would have sufficed.

The local authorities, guides, and visitors showed us the utmost sympathy and kindness. Between France and Great Britain blood is still thicker than water. I would express my most grateful thanks to one and all at Pralognan, notably to M. Jean Giraud, Sous Préfet of Moûtiers-Salins, the Mayor and Curé of Pralognan, M. Doussin of the Hôtel des Glaciers,

M. Couttet of the Félix Faure hut, and, last but not least, to the French Military and Police Authorities and to M. Louis Bucherer and to the Rev. P. B. Whalley.

As to Pierre Blanc and Adolph Pollinger, their conduct was worthy of their name and family. No higher praise can be given.

The funeral took place at Pralognan on July 16 in the presence of Lawrie's widow and sister, the civil authorities and many of the inhabitants and visitors of Pralognan. The French Army was also officially represented.

E. L. STRUTT.

SIR HENRY HUBERT HAYDEN and his old guide and travelling companion in Sikkim, César Cosson of Courmayeur, arrived at the 'Steinbock' at Lauterbrunnen on August 8 after a five days' tour in the Diablerets, Wildhorn and Wildstrubel group. On August 9 they paid a visit to Mürren, and engaged a second guide, Karl von Allmen of Lauterbrunnen. On August 10 the party went up to the Rottal Hut, and crossed the Jungfrau to the Pavillon Cathrein on August 11 in 8 hrs. 50 mins. Next day they reached the Finsteraarhorn Hut. Early on August 13 they took the Finsteraarhorn by storm in 2½ hrs. and enjoyed the clear view on this fine summer's morning during an hour's rest on the summit. On the descent to the Hugiattel, they met Messrs. Chorley, Graham and Wilson (who had left the hut ½ hr. after them), who testify that Sir Henry and his guides were in great form. Distinct traces of well-cut steps have been found the whole way down the icy part of the N. arête of the Finsteraarhorn which leads to the top of the Agassizjoch. In climbing down the last steep but easy rocky bit of the ridge (see photograph) a great mass of rock must have split off, so that this, in my opinion, very able party was hurled down by the avalanche of stones on to the Fiescherfirn, 800 feet below.

When no news was received in Lauterbrunnen of the party, it was presumed that they had extended their tour. Anxiety, however, was aroused, and on August 28 two strong search parties of Lauterbrunnen guides, the one via the Jungfrauoch, the other via the Strahlegg route, set out, and the bodies, frozen hard, nearly covered with snow, bearing marks of fatal injuries and surrounded by fallen stones, were discovered on the 29th at the place marked on the photograph. They were carried down on the following day over the Jungfrauoch to Lauterbrunnen, and were interred in one grave.

OTHMAR GÜRTNER, A.A.C.B. & S.A.C.

Lauterbrunnen.

THE ALPINE CLUB LIBRARY.

The following additions have been made to the Library:—

Club Publications.

- Akad. Alpen-Ver. München.** 30. Jahresb. 11 × 8: pp. 30: ill. 1923
 New expeditions, 1922:—*E. Röckl*, S. Söllerkopf O.-Wand: Hermannskarturm W.-Wand u. S.O.-Wand: *H. Freymadl*, N. Wolfel nersp. W.-Wand: *W. Englehardt*, Obere Wettersteinsp. Abst. n. N., allein: *D. Böttcher*, Wasserkarturm N.-Wand.
- Appalachian Mountain Club.** Register for 1923. Supplement to Bulletin. 7 × 4½: pp. 138.
- C.A.F.** Commission de topographie & de cartographie alpines. Procès-Verbaux. 10½ × 8½: pp. 30. Janv.—Juin 1923
- C.A.I. Sez. Milano.** Cinquant'anni di vita 1873-1923. 11 × 8½: pp. 266: ill. Milano, Bertieri, 1923
 Contents:—*A. Ancona*, 50 anni di alpinismo: *M. de Marchi*, I Presidenti della Sezione: *E. Ghisla*, Le nostri guide: *G. Lavezzari*, Capanne d. Sezione: *M. de Marchi*, Studio scientifico d. Alpi: *E. Mariani*, Cenni geologica sul gruppo d. Grigne.
- **Sez. Soc. Alp. trid.** La Gazzetta del turismo e dello sport. Organo ufficiale. Anno 3, no. 1-3. 1923
- Centre excursionista Barcelones.** Butlletí. Any ix, no. 94. 8½ × 6½
 Settembre 1923
- Mountain Club of Natal.** Annual 1, 2, 3. 8½ × 5½ and 9 × 6: ill.: pp. 21, 34, 55. 1920, 1922, 1923
- These contain:—
 1. *D. W. Bassett-Smith*, Ascents Sentinel Pk., Mont-Aux-Sources Eastern buttress, Up the Berg into Basutoland, Broome Hill, Dooley Hill: *Miss H. A. Coates*, Mont-Aux-Sources.
 2. *K. Cameron*, First ascent outer 'Mweni Needle: *D. W. Bassett-Smith*, Mountains of Natal: Ascent of Drakensberg Peaks, 1888-1921.
 3. *Miss D. Finch*, Cathkin Pk. camp: *G. Londt*, An ascent of Cathkin Pk.: *Miss C. H. Robb*, An amateur's thoughts on a rock climb on Table Mn.
- The Pinnacle Club.** Rules, etc. 5 × 4: pp. 6. 1923
- S.A.C. St. Gallen.** Touren program 1923. 5½ × 3½.
 — Jahresberichte 1921, 1922. 8½ × 6: pp. 15, 24.
- S.M.C. Guide.** Vol. 3, Section A. Island of Skye. Edited by E. W. Steeple, G. Barlow, and H. MacRobert. 9 × 5½: pp. 126: maps, plates. Edinburgh, July, 1923. 10/-

New Works.

- Arthur, J. W.** A sixth attempt on Mount Kenya. In Geogr. Journ., London, vol. 62, no. 3. 9½ × 6½: pp. 205-9. September 1923
- Baedeker, K.** Tirol Vorarlberg u. Teile v. Salzburg u. Kärnten. 37. Aufl. 6½ × 4½: pp. xl, 512: maps. Leipzig, 1923
- Baillie-Grohman, W. A.** Catalogue of . . . Old Engravings. . . Sale, Sotheby & Co. 14 May 1923
 Contains photograph plate 'Voyage de M. de Saussure à la cime du Mont-Blanc,' publ. 1790 by Mechel.
- Beraldi, Henri.** Le sommet des Pyrénées. Notes d'un Bibliophile. I, Les cent et un pics. 9 × 5½: pp. lii, 177. Paris, 1923
- Der Berg.** Monatschrift für Bergsteiger. Hft. 1. 11½ × 8½: ill. München, Verlag Bergland, Mai 1923
- Bingham, Hiram.** Inca Land. Explorations on the Highlands of Peru. 8½ × 5½: pp. xvi, 365: ill. Boston and New York, Houghton Mifflin (1922). 24/-
 An account of journey from 1909 to 1915. The author reached a height

- of over 21,000 ft. on the summit of Coropuna, to a description of the climbing of which a chapter is devoted. Among the plates are:—Coropuna from the N.W. and from the Söcamping at 18,450 ft., Camp on the summit: Glaciers between Cuzco and Uiticos: Mt. Veronica: Grosvenor Glacier and Mt. Salcantay.
- Blodig, Karl.** Die Viertausender der Alpen. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 324: plates. München, Rother, 1923. 8/-
Chiefly reprints from publications of the D. u. Oe. A.-V. and the Oe. A.-C. The climbing covers 40 years in Switzerland and on the Mont Blanc range.
- Bower, Geo. S.** Doe Crags and climbs round Coniston. A climber's guide. 8×5 : pp. 47: plates. Barrow Printing Company, 1923. 2/3
The first of a series of guides to be published by the Fell & Rock Climbing Club. To be got from G. Wilson, Town Clerk's Office, Warrington.
- Bruce, C. G., and other Members of the Expedition.** The assault on Mt. Everest 1922. $10 \times 6\frac{1}{2}$: pp. xi, 339: maps, plates. London, Arnold, 1923. 25/-
C. G. Bruce, Narrative: G. H. L. Mallory, The first attempt: G. Finch, The attempt with oxygen: G. H. L. Mallory, The third attempt: T. H. Somervell, Notes: T. G. Longstaff, Natural history.
- Collet, Leon W.** Alpine lakes. Reprint Scot. Geogr. Mag. vol. 38. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 73–101: ill. April 1922
- Coolidge, W. A. B.** My alpine scrapbook. No. 41. Where is the Alphubel? In Engl. Herald Abroad. Oct. 1923
This is the last of the series.
- Ferrand, H.** Grenoble Capitale des Alpes Françaises. $8\frac{1}{2} \times 6\frac{1}{2}$: pp. 156: plates. Grenoble, Rey, 1923. Fr. 16
A very finely illustrated work on Grenoble and the mountains in the neighbourhood. On p. 110 is a small portrait of Pere Gaspard.
- Ferreri, Eugenio.** C.A.I. Guida dei Monti d'Italia. Alpi occidentali, vol. 3, Alpi Cozie settentrionali. $6\frac{1}{2} \times 4\frac{1}{2}$: pp. xii, 510: maps, ill. Torino, 1923
- Gregory, J. W. & C. J.** To the alps of Chinese Tibet. An account of a journey of exploration up to and among the snow-clad mountains of the Tibetan frontier. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 321: maps, plates. London, Seeley Service 1923. 25/-
- Hamilton-Ross, J. G.** An ascent of Mount Sekerr, Kenya Colony. In Geogr. Journ., London, vol. 62, no. 3. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 210. September 1923
- Hardmeyer, J.** Locarno und seine Täler. 5. Aufl. $8 \times 5\frac{1}{2}$: pp. 108: ill. Zürich, Orell Füssli, 1923
- Hedin, Sven.** Mount Everest. $7\frac{1}{2} \times 5\frac{1}{2}$: pp. 194: plates, maps. Leipzig, Brockhaus, 1923
Accounts of the recent attempts on Mount Everest, with chapters on 'Jesuits and Capuchins in the neighbourhood of Mt. Everest' and 'Mt. Everest and Gaurisankar in chinese geography.'
- Inaka, or Reminiscences of Rokkōsan and Other Rocks.** Vol. 16. $9 \times 6\frac{1}{2}$: plates: pp. 102. Yokohama, 1923
Kindly presented by Mr. H. E. Daunt.
- Among other articles this contains:—*C. H. Archer, Peaks of Puk-han—difficult rock climbing in Korea in 1922: T. Orde Lees, H. Crisp, Two winter ascents of Fuji in Feb. 1922: F. H. Lowe, G. Gualta, Winter ascent of Fuji in Feb. 1901: B. Nagano, Ascent, 1921, of Fude-Iwa or Pen Rock.*
- The excellent plates include three coloured views of Fuji: Yurigatake, Hadaka ridge, Harinoki-Toge, Tsurugi-Dake, Fude-Iwa and several of Puk-han.
- Leyden, Fr.: h.s.g. v.** Ostalpine Formenstudien. Abteil. 3, Hft. 2. Die Oberflächengestaltung d. östl. Sugauner Gebietes v. Rt. Schwinner. $10 \times 6\frac{1}{2}$: pp. 138. Berlin, Borntraeger, 1923
- Morris, C. J.** The gorge of the Arun. In Geog. Journ., London, vol. 62, no. 3. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 161–173: plates. September 1923
- New Zealand.** Tourist and Health Resorts Report. 1923
'The Hermitage has been leased to the Mount Cook Motor Co. . . . It is intended to keep the establishment open during the winter months.'

- ... A record of high ascents will be kept by the Company and embodied in the records of the Department.'
- P.L.M. The Route des Alpes.** By Sir Martin Conway. $9\frac{1}{2} \times 5\frac{1}{2}$: pp. 26: ill. London, 1923
- Ponting, Herbert G.** The great white South, or with Scott in the Antarctic. Third edition. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. xxvi, 306: plates. London, Duckworth (1923). 7/6
- Porter, H. E. L.** Climbing in the Ogwen district. Appendix. 6×5 : pp. 138-162. London, Arnold, 1921
- Reynolds, J. H.** The High Tatra in 1878 and 1922. In Geogr. Journ., London, vol. 62, no. 3. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 194-202: plates. September 1923
- Ronaldshay, Earl of.** Lands of the thunderbolt: Sikhim, Chumbi and Bhutan. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. xvii, 267: plates, map. London, etc., Constable, 1923
- Among the plates are:—Mount Jannu: On the road to the eternal snows: Pandim, 22,100 ft.: Kanohenjunga fr. Gochak La: Cho-mo-lhari.
- Rousseau, Jean Jacques.** En Savoie. Annecy—Chambéry—Les Charmettes. Extraits des 'Confessions' situés et commentés par F. Vermales. $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 221. Chambéry, Dardel, 1922
- Schröter, C.** Das Pflanzenleben der Alpen . . . 2. neu durchgearbeitete Aufl. 1. Lief. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 336: ill. Zürich, Raustein, 1923
- Skeat, E. G. (Mrs. Woods).** The principles of geography, physical and human. $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 432: ill. Oxford, Clarendon Press, 1923
- Section V. is on modelling of land surface, work of running water, frost, snow, and ice, etc. A very good handbook on the groundwork of geography.
- Snowdon and Welsh Highland Holiday Book.** $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 90: ill. Llanberis, Snowdon Mn. Tramcar Co. (1923)
- Contains:—Literary associations of Snowdonia, by L. J. Roberts: etc.
- Snowdon.** The Book of Snowdon. $7\frac{1}{2} \times 5$: pp. 62: map, ill. (London, Gale & Polden, 1923)
- Contains extracts from Twells Brex, Watts-Dunton, Tennyson, Borrow, H. S. Salt.
- Switzerland.** Dictionnaire historique et biographique. Fasc. 13. Brusse-Lamotte—Canton. $11 \times 7\frac{1}{2}$: pp. 321-400: ill. 1923
- Weilenmann, J. J.** Aus der Firnenwelt. I. Rhätikon, Silvretta, Ferwall. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 296: plates. München, Rother, 1923. Fr. 3
- Ascents of P. Linard, Fluchthorn, P. Buin, Riffler, etc.
- Young, G. W.** Mountaineering and its prophets. In Cornhill Mag., London, N.S. 326. $9 \times 5\frac{1}{2}$: pp. 222-38. August 1923

Older Works.

- Affalo, F. G.:** edited by. Sport in Europe. $10 \times 7\frac{1}{2}$: pp. xii, 283: plates. London, Sands, 1901
- Fane, Henry Edward.** Five years in India . . . a residence in the Himalayah mountains. . . . 2 vols. $7\frac{1}{2} \times 4\frac{1}{2}$: pp. xvi, 323: xii, 319: plates. London, Colburn, 1842
- Töpffer, Rudolf.** Voyages en zigzag d'un pensionnat en vacances dans les cantons suisses et sur les revers italien des Alpes. $10\frac{1}{2} \times 7$: pp. viii, 542: ill. Paris, Dubochet, 1844

Items.

- Postage Stamps.** 2 *Armenian* with views of Ararat: 2 *Japanese* with rock views: *Swiss* 5c. with three peaks.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Tuesday, November 6, 1923, at 8.30 P.M., Brig.-General the Hon. C. G. Bruce, C.B., M.V.O., *President*, in the Chair.

The following candidates were balloted for and elected Members of the Club, namely, Mr. Henry Booth, Mr. Allen Carpe, Mr. Victor Thomas Ellwood, F.R.C.S., Mr. Bertrand Leslie Hallward, Monsieur Balthazar T. Baron van Heemstra, and Mr. Charles Gustavus Markbreiter.

The PRESIDENT said : Since the last meeting the Club has suffered grievous loss in the deaths of the following Members, two of them ex-Presidents of the Club. Their names are : Oscar Browning, elected 1864 ; Thomas Middlemore, elected 1871 ; Sir Edward Davidson, elected 1875, *ex-President* ; Rev. T. W. Bull, elected 1875 ; Lord Sterndale, elected 1894, *ex-President* ; W. P. Ker, elected 1909 ; Colonel L. C. F. Oppenheim, elected 1911 ; Sir Henry H. Hayden, elected 1921 ; and Dr. H. Whitby Phillips, elected 1903. Obituary notices will appear in the forthcoming number of the ALPINE JOURNAL.

I am now in a position to give you the names of the members of the party for the next Everest Expedition. They are Major E. F. Norton, Second in Command, Mr. T. H. Somervell, Mr. G. L. Mallory, Mr. E. N. Odell, Mr. Bentley Beetham, Mr. Richard B. Graham, and Mr. A. C. Irvine. These gentleman will form the climbing party. In addition to myself there will be Captain Geoffrey Bruce, Capt. C. J. Morris, Mr. E. O. Shebbeare, and Captain J. Noel as photographer. All the members of the climbing party were selected by the Alpine Club Everest Selection Sub-Committee, which was appointed by the Club for the purpose.

Mr. A. L. MUMM then read a Paper entitled 'A Mixed Bag,' which was illustrated by lantern slides. In this Paper Mr. Mumm described his adventures in the Japanese and New Zealand Alps. Dr. Claude Wilson took part in the discussion which followed the reading of the Paper, and a cordial vote of thanks to Mr. Mumm was carried unanimously.

CORRIGENDA, 'A.J.' No. 226.

The portrait of M. Ferrand is intended as frontispiece.

P. 47, lower plate, read 'From Ghost ridge.'

P. 115, line 7 from bottom, read 'Withers's.'

NOTE.

The maps for Dr. Monroe Thorington's paper and the General Index will be issued with the next number for binding with this Volume.

END OF VOL. XXXV.

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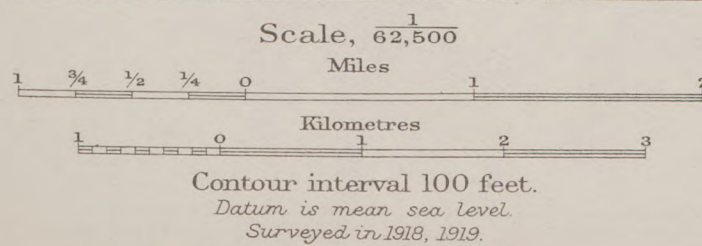
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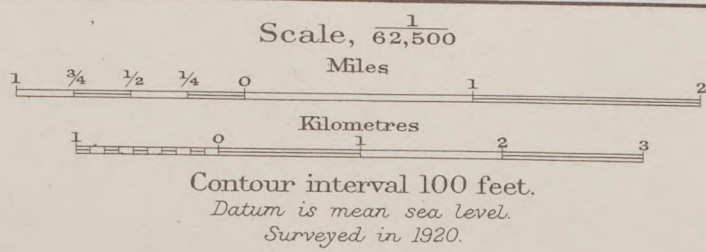
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